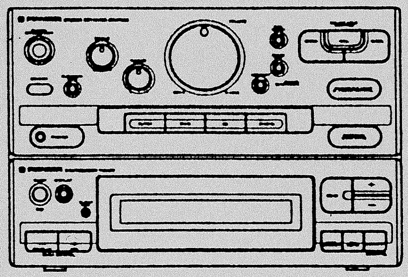
SERV. 8422

Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
ARP2455

STEREO RECEIVER

SX-P420

SX – P420 HAS THE FOLLOWING :

Type	Power Requirement	Remarks
HE	AC220V – 230V, 240V (Switchable) *	
HB	AC220V – 230V, 230 – 240V (Switchable) *	
HEWZI	AC220V – 230V, 230 – 240V (Switchable) *	

* Change the connection of the transformer's primary wiring.

- This manual is applicable to the HE, HB and HEWZI types.
- For HB and HEWZI types, refer to pages 43 – 46.
- These products are component of systems. For the system composition, refer to the system manual (s).
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

CONTENTS

1. EXPLODED VIEWS, PACKING AND PARTS LIST 2
2. CONNECTION DIAGRAM 8
3. SCHEMATIC DIAGRAMS AND PCB CONNECTION DIAGRAMS 9
4. PCB PARTS LIST 34
5. ADJUSTMENTS 38
5. REGLAGE 39
5. AJUSTE 40
6. IC INFORMATION 41
7. FOR HB AND HEWZI TYPES 43
8. PANEL FACILITIES 49
9. SPECIFICATIONS 52

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

© PIONEER ELECTRONIC CORPORATION 1992

DFG FEB. 1992 Printed in Japan

1. EXPLODED VIEWS, PACKING AND PARTS LIST

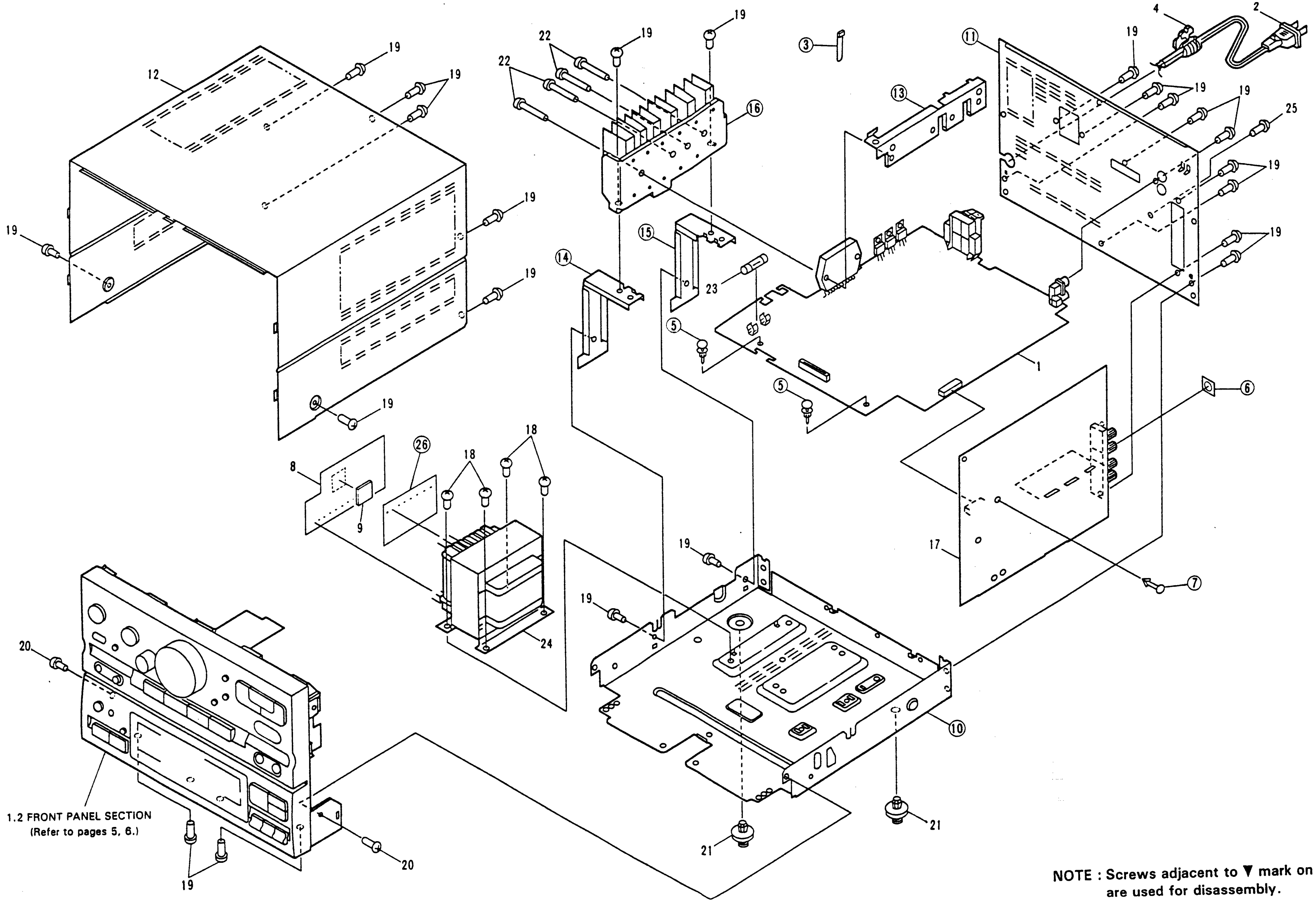
NOTES:

- *The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

1.1 EXTERIOR

Parts list of Exterior

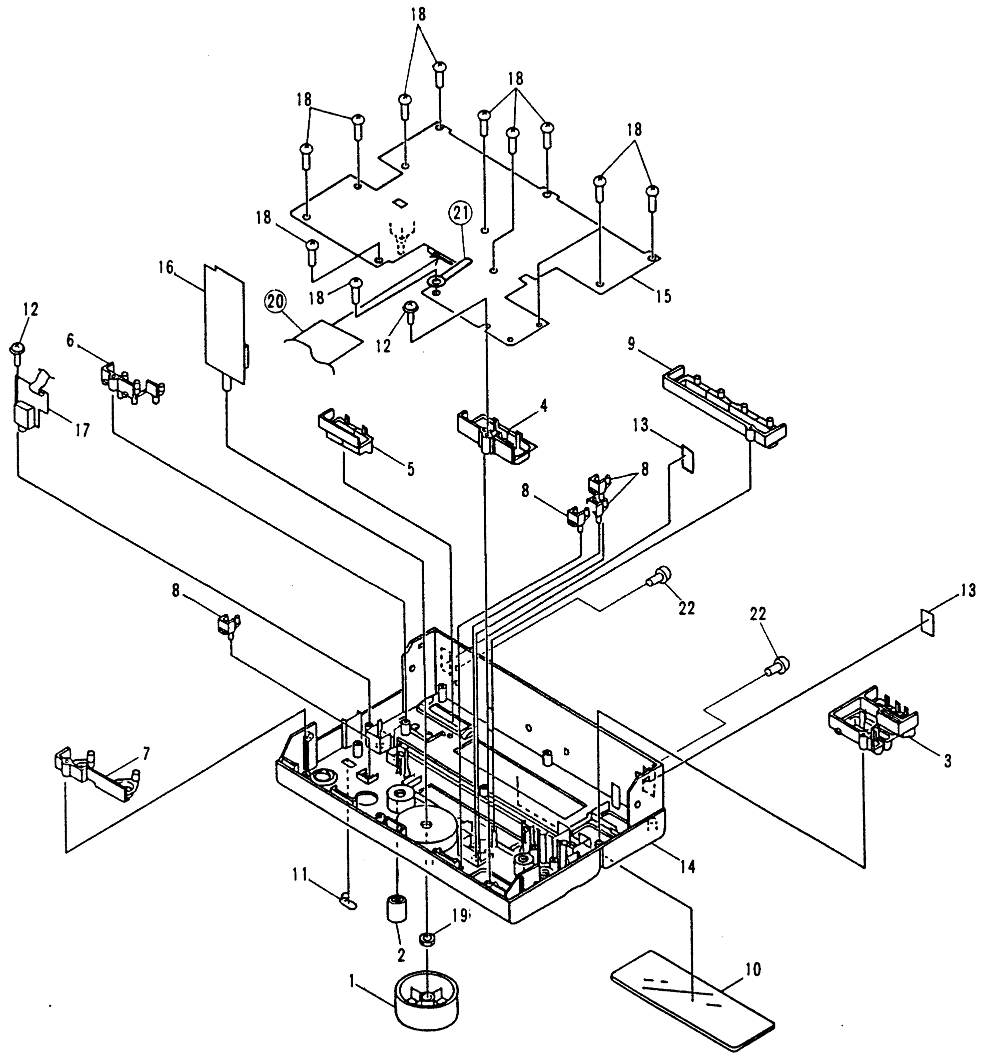
Mark	No.	Description	Parts No.
◉	1	POWER ASSEMBLY	AWZ3928
⚠	2	AC POWER CORD	ADG1049
	3	NYLON BINDER	AEC-093
	4	STRAIN RELIEF	AEC-882
	5	NYLON REVET	AEC1160
	6	SPACER	AEC1236
	7	SPACER	AEC1358
◉	8	TRANS ASSEMBLY	AWZ3930
	9	INSULATION RUBBER	AEZ1004
	10	CHASSIS	ANA1136
	11	REAR PANEL	ANC1826
	12	BONNET	ANE1326
	13	PACK HOLDER	ANG1434
	14	HEAT SINK HOLDER A	ANG1628
	15	HEAT SINK HOLDER B	ANG1629
	16	HEAT SINK	ANH1361
◉	17	TUNER ASSEMBLY	AWZ3938
	18	SCREW	BBZ30P060FMC
	19	SCREW	BBZ30P080FZK
	20	SCREW	CBZ30P080FMC
	21	FOOT ASSEMBLY (RUBBER)	REC-434
	22	SCREW	VBZ30P160FMC
⚠	23	FUSE(T800mA, FU1)	AEK-507
⚠	24	POWER TRANSFORMER (T)	ATS1396
	25	SCREW	VBZ35P080FMC
	26	SPACER ASSEMBLY (HB TYPE ONLY)	AWZ3931



12
19
22
16
3
13
11
4
2
25
15
14
23
5
1
6
8
9
26
18
24
17
7
10
20
21
1.2 FRONT PANEL SECTION
(Refer to pages 5, 6.)

NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

1.2 FRONT PANEL SECTION



Parts list of Front panel section

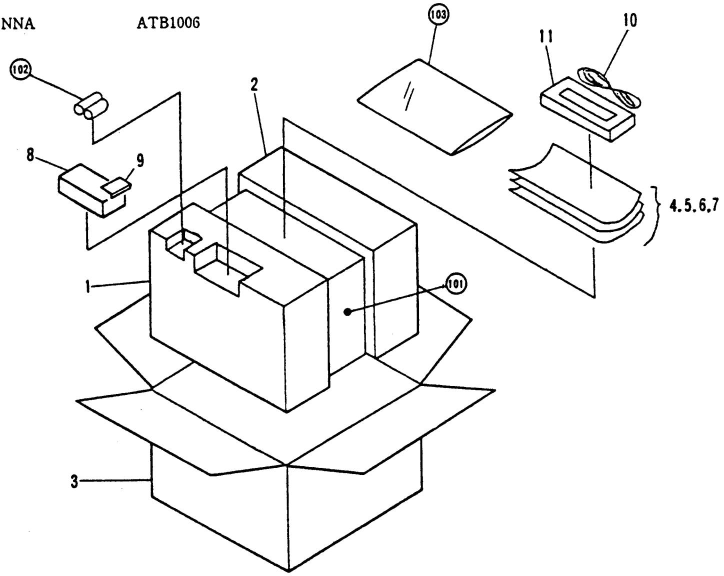
Mark	No.	Description	Parts No.
	1	VOL KNOB	AAB1250
	2	ROTARY KNOB	AAB1273
	3	BAND BOTTON	AAD2177
	4	SFC BOTTON	AAD2179
	5	WAKE UP BOTTON	AAD2180
	6	TIMER BOTTON	AAD2181
	7	POWER BOTTON	AAD2182
	8	AUDITION BOTTON	AAD2185
	9	FUNCTION BOTTON	AAD2208
	10	DECORATIVE PLATE (TUNER)	AAK2260
	11	FILTER	AAK2261
	12	SCREW (STEEL)	ABA1095
	13	RUBBER SHEET	AEB1111
	14	FRONT PANEL	AMB1936
◉	15	FRONT ASSEMBLY	AWZ3935
◉	16	VOLUME ASSEMBLY	AWZ3941
◉	17	HEADPHONE ASSEMBLY	AWZ3942
	18	SCREW	BPZ26P080FMC
	19	NUT	NK90FUC
⚠	20	FLEXIBLE CABLE	ADD1100
	21	BINDER	AEP−215
	22	SCREW	BBZ30P080FZK

1.3 PACKING

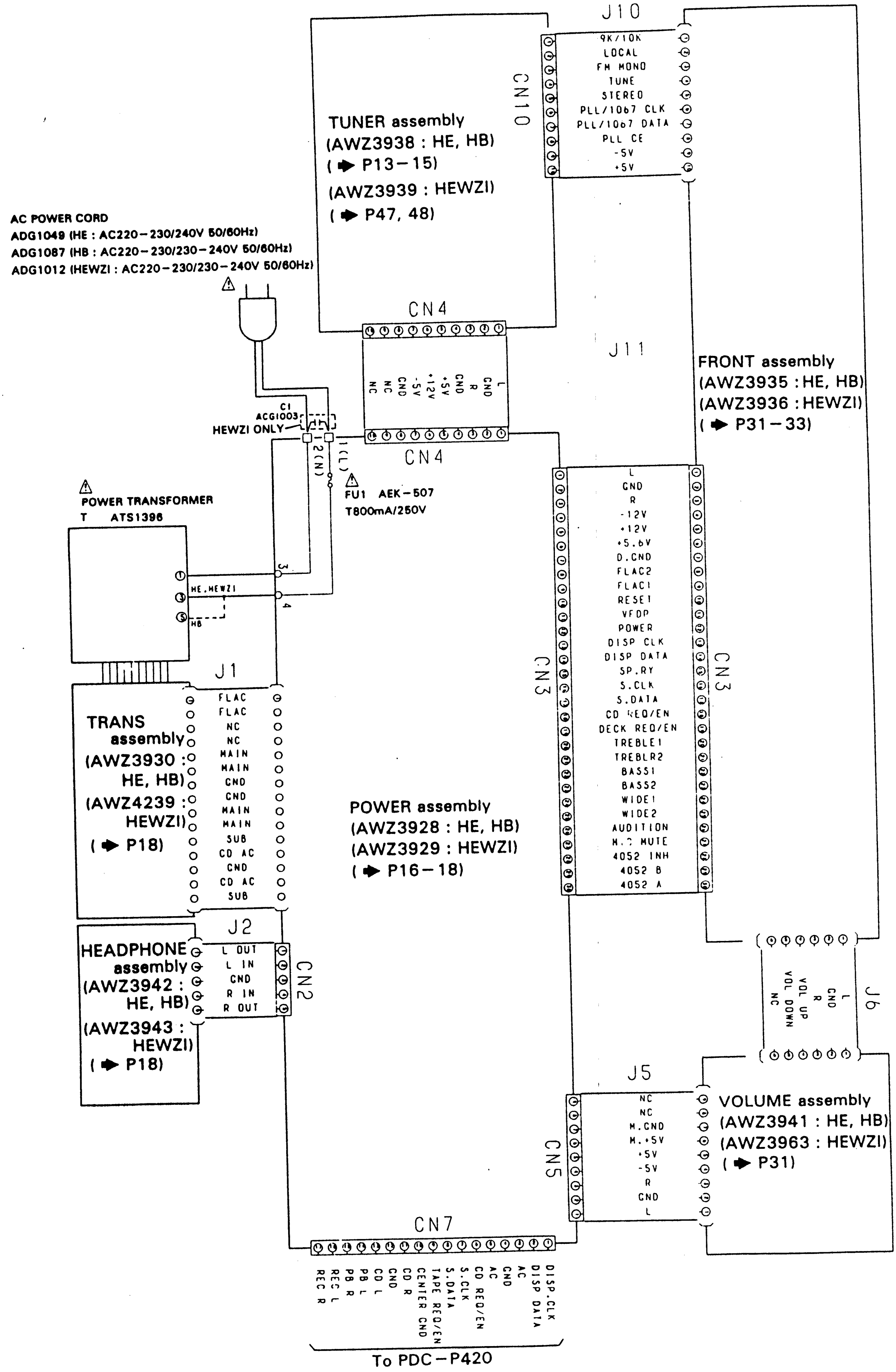
Parts list of Packing

Mark	No.	Description	Parts No.
	1	FRONT PAD	AHA1476
	2	REAR PAD	AHA1477
	3	PACKING CASE	AHD2218
	4	OPERATING INSTRUCTIONS (STEREO RECEIVER/ SPEAKER SYSTEM, DUTCH/SWEDISH/SPANISH/ PORTUGUESE)	ARC1324
	5	OPERATING INSTRUCTIONS (CASSETTE DECK CD, DUTCH/SWEDISH/SPANISH/ PORTUGUESE)	ARC1325
	6	OPERATING INSTRUCTIONS (STEREO RECEIVER/ SPEAKER SYSTEM, ENGLISH/FRENCH/GERMAN ITALIAN)	ARE1223
	7	OPERATING INSTRUCTIONS (CASSETTE DECK CD, ENGLISH/FRENCH/GERMAN ITALIAN)	ARE1231
	8	REMOTE CONTROL UNIT (CU-SX039)	AXD1273
	9	BATTERY COVER	AZA1375
	10	FM ANTENNA	ADH1005
	11	LOOP ANTENNA	ATB1006

Mark	No.	Description	Parts No.
	101	SHEET	AHG1040
	102	DRY CELL BATTERY (R03, AAA)	AEX-021
	103	VINYL BAG	AHG-117



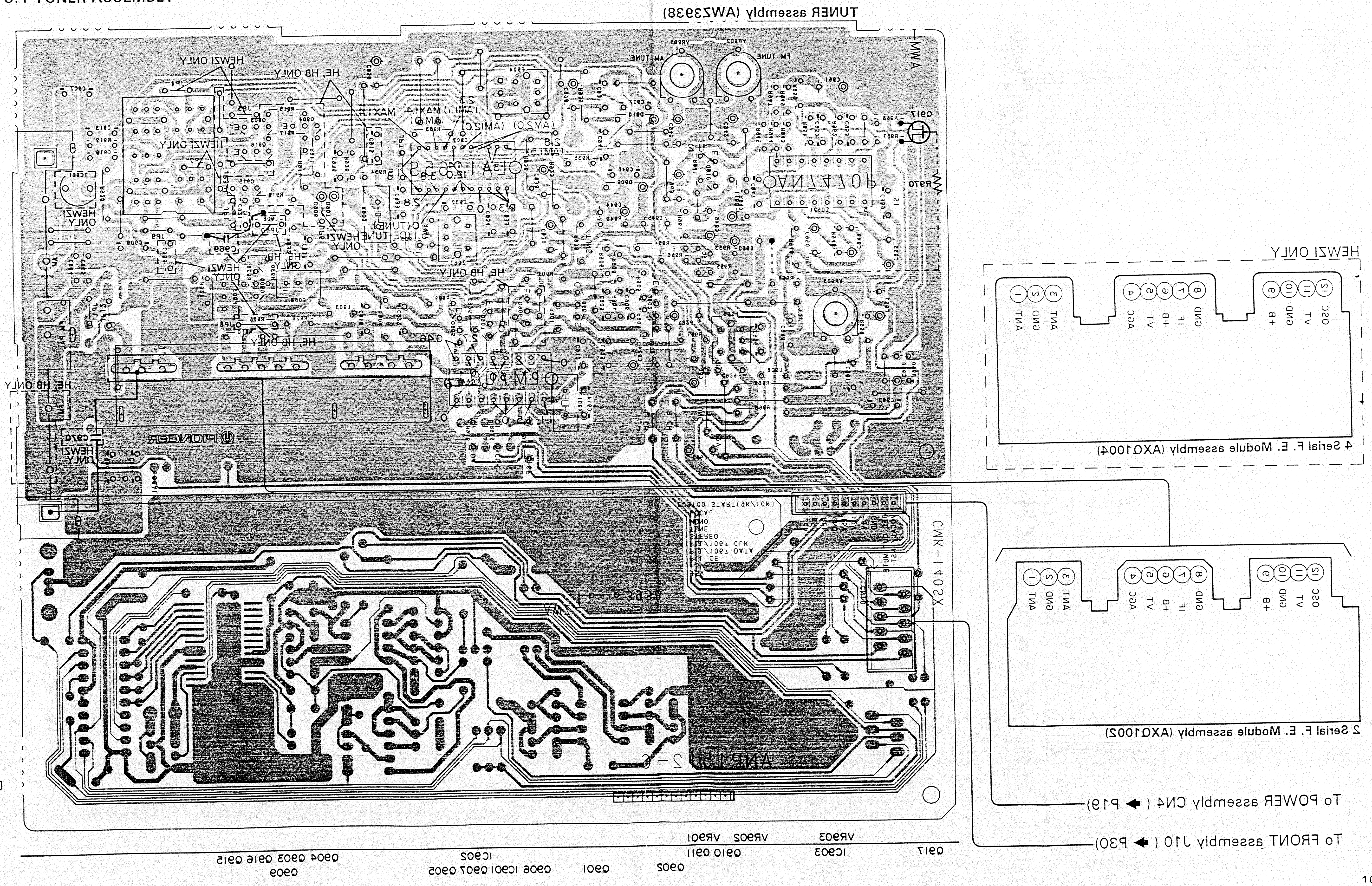
2. CONNECTION DIAGRAM


J10
CN10
9K/10K
LOCAL
FM MONO
TUNE
STEREO
PLL/1067 CLK
PLL/1067 DATA
PLL CE
-5V
+5V
TUNER assembly
(AWZ3938 : HE, HB)
(➡ P13－15)
(AWZ3939 : HEWZI)
(➡ P47, 48)
AC POWER CORD
ADG1049 (HE : AC220－230/240V 50/60Hz)
ADG1087 (HB : AC220－230/230－240V 50/60Hz)
ADG1012 (HEWZI : AC220－230/230－240V 50/60Hz)
CN4
L
GND
R
GND
+5V
+12V
-5V
NC
GND
NC
J11
CN4
C1
ACG1003
HEWZI ONLY
2(N)
1(L)
FU1 AEK－507
T800mA/250V
POWER TRANSFORMER
T ATS1396
①
③
⑤
HE, HEWZI
HB
3
4
FRONT assembly
(AWZ3935 : HE, HB)
(AWZ3936 : HEWZI)
(➡ P31－33)
CN3
L
GND
R
-12V
+12V
+5.6V
D.GND
FLAC2
FLAC1
RESET
VFDP
POWER
DISP CLK
DISP DATA
SP.RY
S.CLK
S.DATA
CD REQ/EN
DECK REQ/EN
TREBLE1
TREBLR2
BASS1
BASS2
WIDE1
WIDE2
AUDITION
M.C MUTE
4052 INH
4052 B
4052 A
CN3
J1
FLAC
FLAC
NC
NC
MAIN
MAIN
GND
GND
MAIN
MAIN
SUB
CD AC
GND
CD AC
SUB
TRANS assembly
(AWZ3930 : HE, HB)
(AWZ4239 : HEWZI)
(➡ P18)
POWER assembly
(AWZ3928 : HE, HB)
(AWZ3929 : HEWZI)
(➡ P16－18)
J2
HEADPHONE assembly
(AWZ3942 : HE, HB)
(AWZ3943 : HEWZI)
(➡ P18)
L OUT
L IN
GND
R IN
R OUT
CN2
J6
L
GND
R
VOL UP
VOL DOWN
NC
J5
CN5
NC
NC
M.GND
M.+5V
+5V
-5V
R
GND
L
VOLUME assembly
(AWZ3941 : HE, HB)
(AWZ3963 : HEWZI)
(➡ P31)
CN7
REC R
REC L
PB R
PB L
CD L
GND
CD R
CENTER GND
TAPE REQ/EN
S.DATA
S.CLK
CD REQ/EN
AC
GND
AC
DISP DATA
DISP.CLK
To PDC－P420

This P. C. B. connection diagram is viewed from the foil side.

3. SCHEMATIC DIAGRAMS AND PCB CONNECTION DIAGRAMS

3.1 TUNER ASSEMBLY


TUNER assembly (AWZ3938)
HEWZI ONLY
HE, HB ONLY
AM TUNE
FM TUNE
MW
PIONEER
4 Serial F. E. Module assembly (AXQ1004)
2 Serial F. E. Module assembly (AXQ1002)
ANT
GND
ANT
AGC
VT
B+
IF
GND
B+
GND
VT
OSC
To POWER assembly CN4 (➡ P19)
To FRONT assembly J10 (➡ P30)
VR901 VR902 VR903
Q910 Q911 IC903 Q917
IC902
Q902 Q901 Q906 IC901 Q907 Q905
Q915 Q916 Q903 Q904
Q909
A
B
C
D
1
2
3
4
5
6

This P. C. B connection diagram is viewed from the parts mounted side.

NOTE

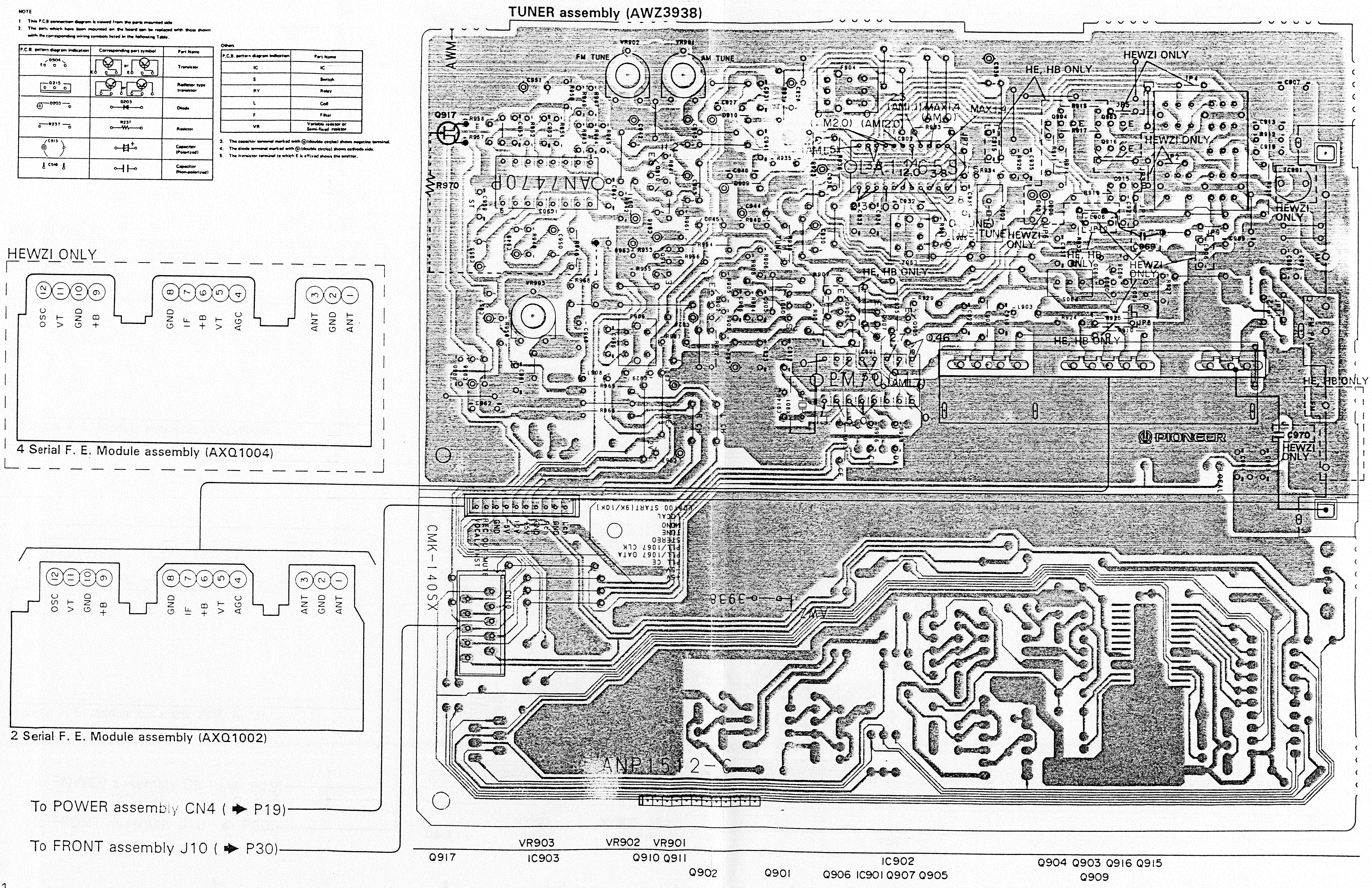
1. This P.C.B connection diagram is viewed from the parts mounted side
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarized)
C518		Capacitor (Non-polarized)

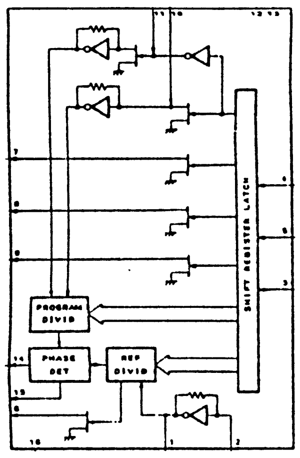
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

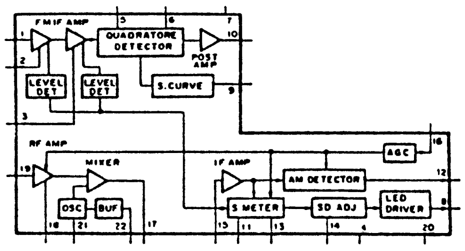
3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


TUNER assembly (AWZ3938)
AWM
FM TUNE
AM TUNE
VR902
VR901
VR903
Q917
R970
AN7470P
HE, HB ONLY
HEWZI ONLY
HEWZI ONLY
12
11
10
9
8
7
6
5
4
3
2
1
OSC
VT
GND
+B
GND
IF
+B
VT
AGC
ANT
GND
ANT
4 Serial F. E. Module assembly (AXQ1004)
2 Serial F. E. Module assembly (AXQ1002)
CMK-140SX
CN10
GND
REC OUT
REAL
-15V
+5V
15V
MUTE
INST
GND
LCD
DDC100 START(9K/10K)
LOCAL
TUNE
MONO
STEREO
PLL/1067 DATA
PLL/1067 CLK
PLL/1067 CE
3938
ANP1512-C
PIONEER
To POWER assembly CN4 (➔ P19)
To FRONT assembly J10 (➔ P30)
Q917
VR903
IC903
VR902
VR901
Q910
Q911
Q902
Q901
IC902
Q906
IC901
Q907
Q905
Q904
Q903
Q916
Q915
Q909
A
B
C
D
1
2
3
4
5
6

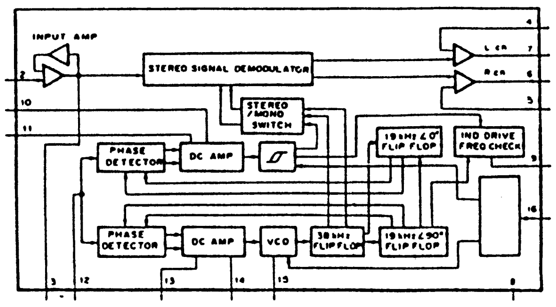
IC901 LM7001


PROGRAM DIVID
PHASE DET
REF DIVID
SHIFT REGISTER LATCH

IC902 LA1265S


FMIF AMP
QUADRATURE DETECTOR
POST AMP
LEVEL DET
LEVEL DET
S.CURVE
RF AMP
MIXER
IF AMP
AGC
AM DETECTOR
OSC
BUF
S METER
SD ADJ
LED DRIVER

IC903 AN7470P

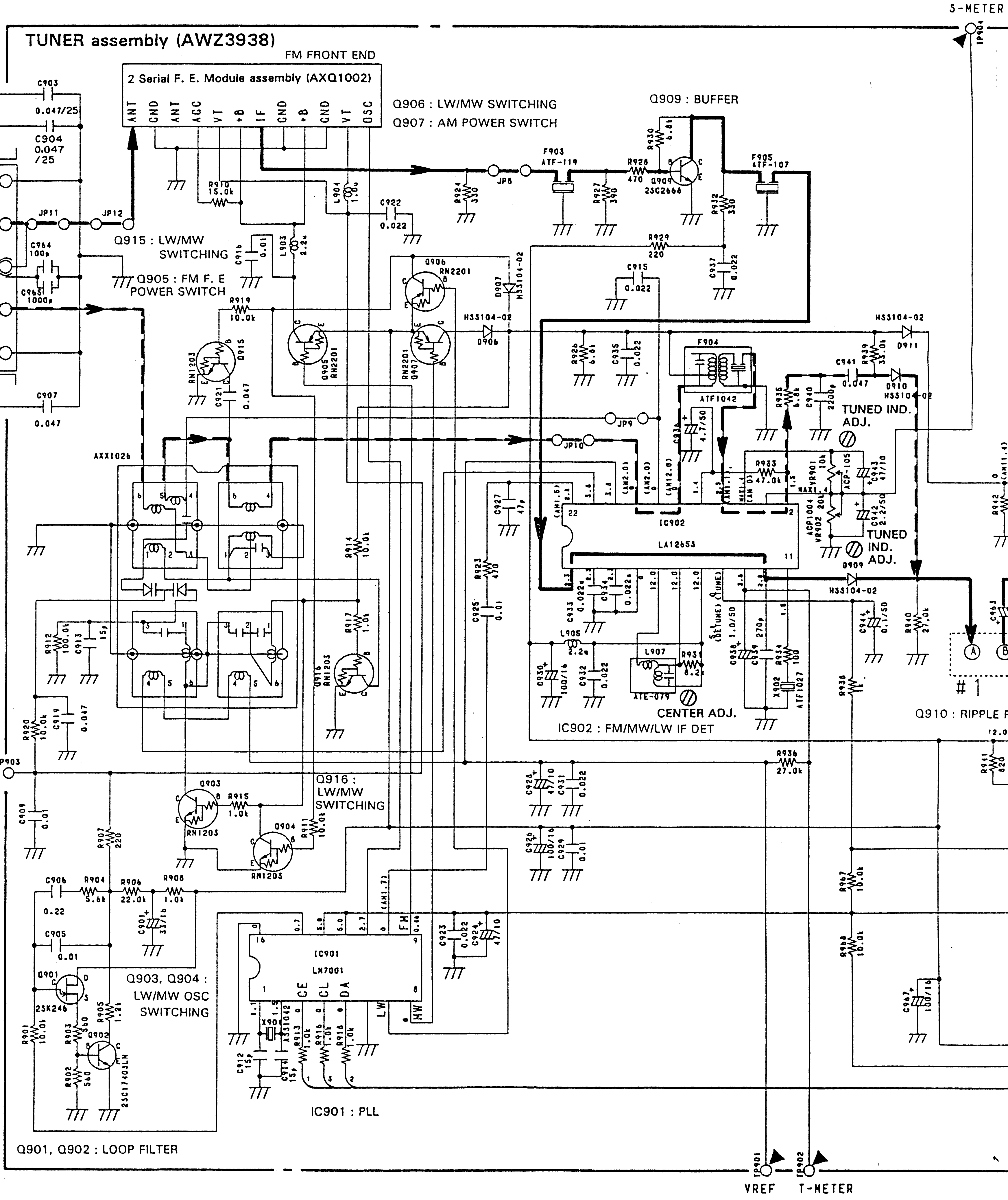

INPUT AMP
STEREO SIGNAL DEMODULATOR
STEREO /MONO SWITCH
PHASE DETECTOR
DC AMP
IND DRIVE FREQ CHECK
19kHz∠0° FLIP FLOP
PHASE DETECTOR
DC AMP
VCO
38kHz FLIP FLOP
19kHz∠90° FLIP FLOP
L ch
R ch

1. RESISTORS:
Indicated in Ω, ¼W, ⅟
M : MΩ, (F) : ±1%, (G

2. CAPACITORS:
Indicated in capacity
Indication without v

3. VOLTAGE, CURREN
▭ : Signal voltag
▭ : DC voltage (V
Value in (
⇦ mA : DC current a
mV : Signal volta

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found
portance of the safety
be sure to use parts of
※ marked capacitors
▼ (RED) : Measurem
This is the basic sche
due to improvements i


TUNER assembly (AWZ3938)

FM FRONT END
2 Serial F. E. Module assembly (AXQ1002)
ANT
GND
ANT
AGC
VT
+B
IF
GND
+B
GND
VT
OSC
Q906 : LW/MW SWITCHING
Q907 : AM POWER SWITCH
Q909 : BUFFER
S-METER
TP904
FM 75ohm
FM 75ohm (PAL)
AM
AKA1010
JP11
JP12
JP8
JP9
JP10
C903 0.047/25
C904 0.047 /25
C907 0.047
C964 100p
C965 1000p
Q915 : LW/MW SWITCHING
Q905 : FM F. E POWER SWITCH
R910 15.0k
L904 1.0u
C922 0.022
L903 2.2u
C916 0.01
R919 10.0k
R924 330
F903 ATF-119
R928 470
Q909 2SC2668
R930 6.8k
R927 390
R932 330
F905 ATF-107
R929 220
C915 0.022
C937 0.022
Q906 RN2201
Q905 RN2201
Q907 RN2201
D907 HS3104-02
D906 HS3104-02
Q915 RN1203
C921 0.047
AXX1026
R926 6.8k
C935 0.022
F904
ATF1042
C936 4.7/50
R935 6.8k
C940 2200p
C941 0.047
R939 33.0k
D911 HS3104-02
D910 HS3104-02
TUNED IND. ADJ.
R933 47.0k
VR901 10k
ACP-105
C943 47/10
ACP1004
VR902 20k
C942 2.2/50
TUNED IND. ADJ.
D909 HS3104-02
IC902
LA1265S
C927 47p
R923 470
C925 0.01
C933 0.022u
C934 2.2
0.022u
L905 2.2u
C930 100/16
C932 0.022
L907
ATE-079
R931 8.2k
CENTER ADJ.
C938 1.0/50
C939 270p
R934 100
X902 ATF1027
C944 0.1/50
R940 27.0k
R938
IC902 : FM/MW/LW IF DET
Q910 : RIPPLE F
#1
R942
R941 820
R914 10.0k
R917 1.0k
Q916 RN1203
R912 100.0k
C913 15p
R920 10.0k
C919 0.047
TP903
VT
C909 0.01
R907 220
Q903 RN1203
R915 1.0k
Q904 RN1203
R911 10.0k
Q916 : LW/MW SWITCHING
R936 27.0k
C928 47/10
C931 0.022
C926 100/16
C929 0.01
R967 10.0k
R968 10.0k
C967 100/16
C906 0.22
R904 5.6k
R906 22.0k
R908 1.0k
C901 33/16
C905 0.01
Q901 2SK246
R901 10.0k
R903 560
R905 1.2k
Q902 2SC1740SLN
R902 560
Q903, Q904 : LW/MW OSC SWITCHING
Q901, Q902 : LOOP FILTER
IC901
LM7001
CE
CL
DA
LW
MW
FM
C923 0.022
C924 47/10
C912 15p
C914 15p
X901 A351042
R913 1.0k
R916 1.0k
R918 1.0k
IC901 : PLL
TP901
VREF
TP902
T-METER

:
Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ,
: ±1%, (G) : ±2%, (K) : ±10% (M): ±20% tolerance

RS:
capacity (μF)/voltage (V) unless otherwise noted p : pF
without voltage is 50V except electrolytic capacitor.

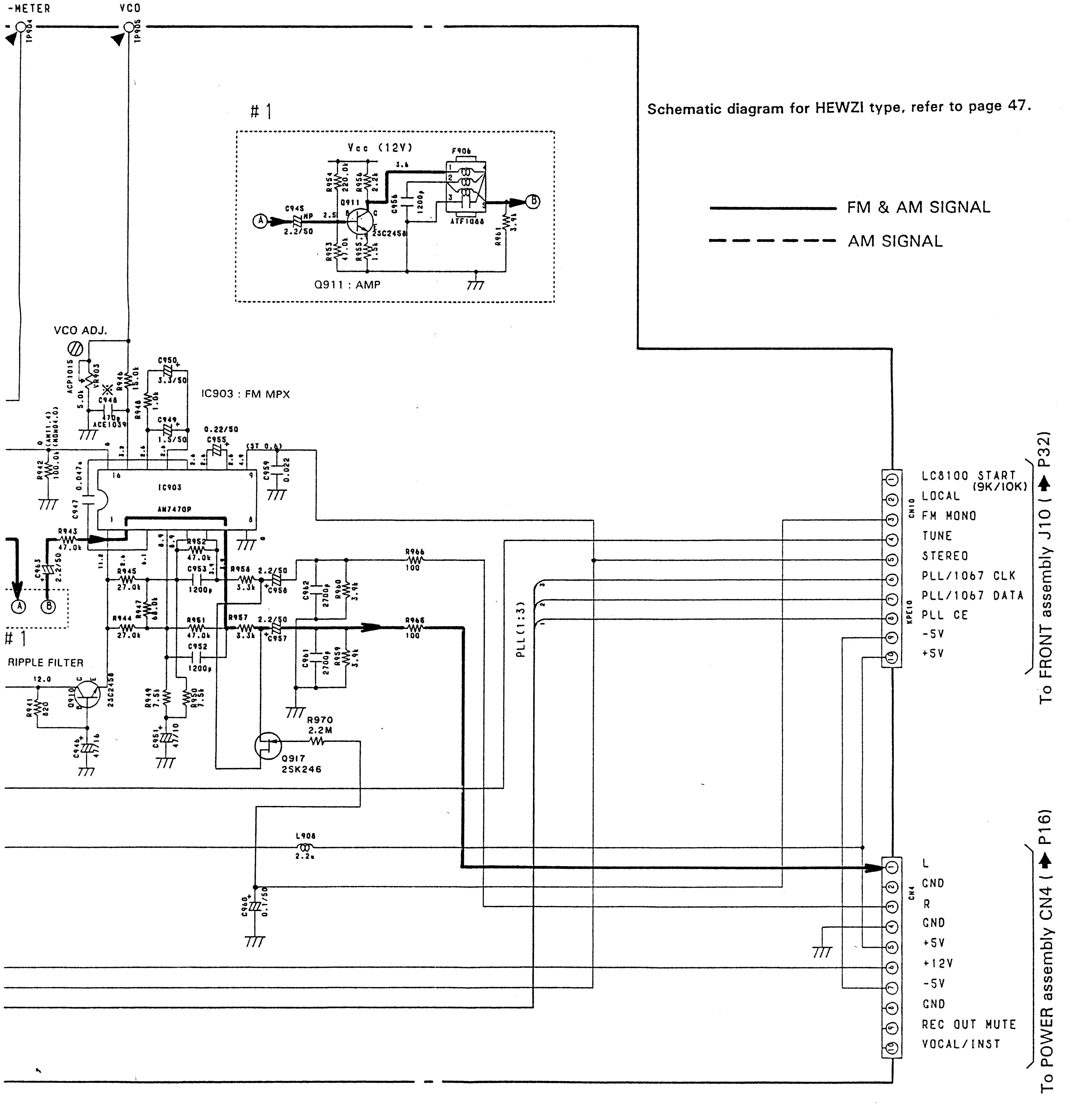
CURRENT:
nal voltage at (24 W + 24 W 8Ω)output (1kHz)
: voltage (V) at no input signal
lue in ( ) is DC voltage at rated power.
: current at no input signal
gnal voltage at FM 1kHz, 100% MOD.

route.
ing point.
ark found on some component parts indicates the im-
the safety factor of the part. Therefore, when replacing,
se parts of identical designation.
capacitors and resistors have parts numbers.
Measurement point
basic schematic diagram, but the actual circuit may vary
rovements in design.

5. SWITCHES (The underline indicates the switch position)

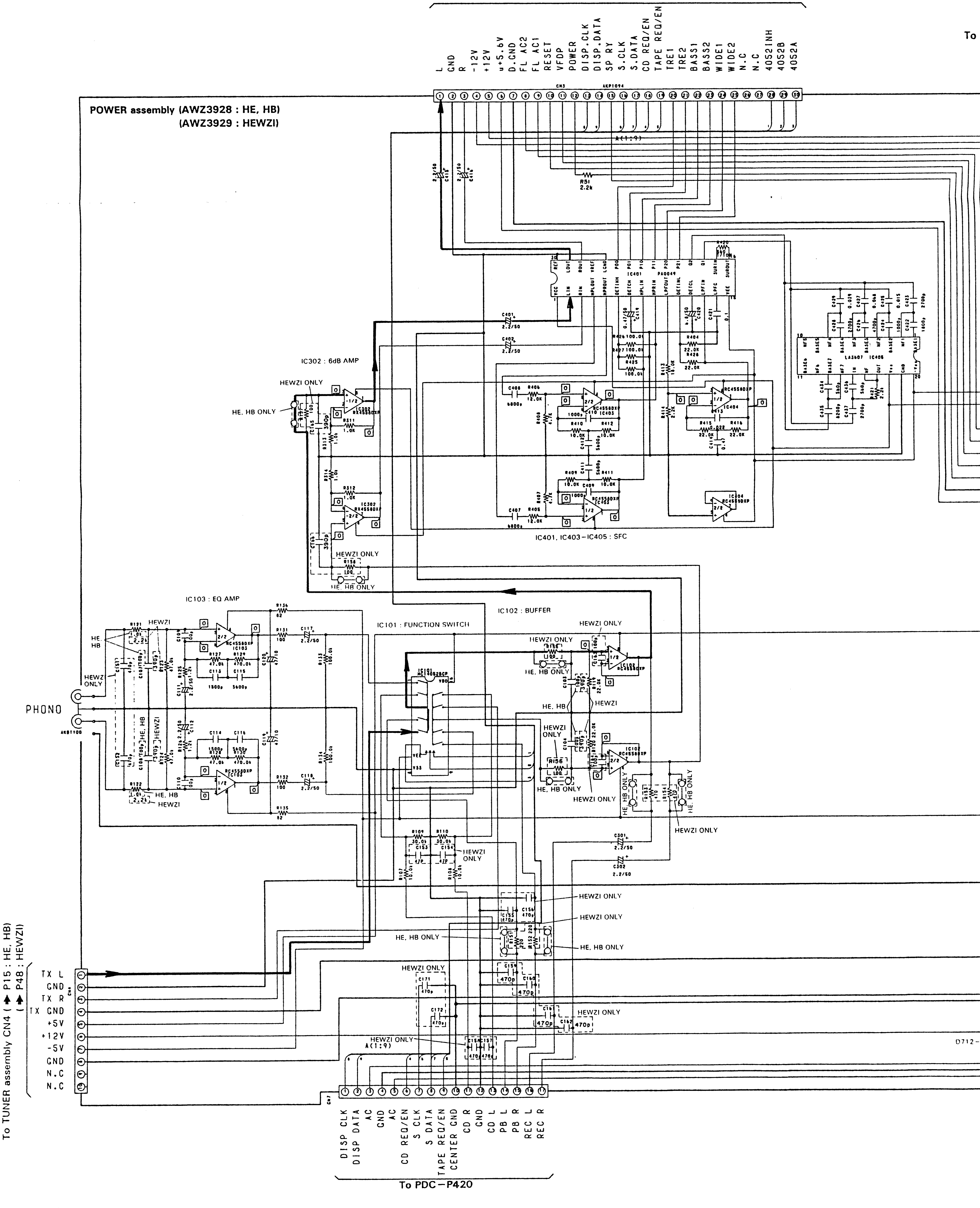
FRONT assembly

S3001	POWER
S3002	TIMER SET
S3003	WAKE UP / −
S3004	FM MONO
S3005	TUNER −
S3006	SFC BGM
S3007	SMART MEMORY
S3008	SFC CLEAR
S3009	S. STEREO WIDE
S3010	TREBLE EQ
S3011	DISPLAY
S3012	REC TIMER / +
S3013	FREQ / ST
S3014	TUNER +
S3015	SFC DISCO
S3016	SMART START / SET
S3017	FUNCTION CD
S3018	FUNCTION TUNER
S3020	CLOCK ADJUST
S3021	MEMORY
S3022	BAND
S3023	SFC HALL
S3024	FUNCTION PHONO
S3025	FUNCTION TAPE


-METER
VCO
TP904
TP905
#1
Vcc (12V)
F906
R954 220.0k
R956 2.2k
3.6
Q911
C945 NP 2.2/50
2.5
C956 1200p
2SC2458
ATF1068
R953 47.0k
R955 1.5k
R961 3.9k
Q911 : AMP
FM & AM SIGNAL
AM SIGNAL
VCO ADJ.
ACP1015
VR903 5.0k
C946 470p
ACE1039
R946 15.0k
R948 1.0k
C950 3.3/50
C949 1.5/50
C955 0.22/50
(ST 0.6)
C959 0.022
IC903 : FM MPX
R942 100.0k
(AM11.4) (MONO4.0)
C947 0.047μ
IC903
AN7470P
R943 47.0k
C963 2.2/50
R952 47.0k
C953 1200p
R956 3.3k
C958 2.2/50
C962 2700p
R960 3.9k
R966 100
R945 27.0k
R947 68.0k
R944 27.0k
R951 47.0k
C952 1200p
R957 3.3k
C957 2.2/50
C961 2700p
R959 3.9k
R965 100
PLL(1:3)
#1
RIPPLE FILTER
12.0
R941 820
Q910
2SC2458
C948 47/16
R949 7.5k
R950 7.5k
C951 47/10
R970 2.2M
Q917 2SK246
L908 2.2μ
C960 0.1/50
CN10
KPE10
LC8100 START (9K/10K)
LOCAL
FM MONO
TUNE
STEREO
PLL/1067 CLK
PLL/1067 DATA
PLL CE
-5V
+5V
To FRONT assembly J10 (➔ P32)
CN4
L
GND
R
GND
+5V
+12V
-5V
GND
REC OUT MUTE
VOCAL/INST
To POWER assembly CN4 (➔ P16)

Schematic diagram for HEWZI type, refer to page 47.

3.2 POWER ASSEMBLY, TRANS ASSEMBLY AND HEADPHONE ASSEMBLY


To FRONT assembly CN3 (➜ P31)
L
GND
R
-12V
+12V
u+5.6V
D.GND
FL AC2
FL AC1
RESET
VFDP
POWER
DISP.CLK
DISP.DATA
SP RY
S.CLK
S.DATA
CD REQ/EN
TAPE REQ/EN
TRE1
TRE2
BASS1
BASS2
WIDE1
WIDE2
N.C
N.C
4052INH
4052B
4052A
CN3
AKP1094
To
POWER assembly (AWZ3928 : HE, HB)
(AWZ3929 : HEWZI)
A(1:9)
R51
2.2k
IC401
PA0049
LA3607 IC406
IC302 : 6dB AMP
HEWZI ONLY
HE, HB ONLY
IC401, IC403–IC405 : SFC
IC103 : EQ AMP
IC102 : BUFFER
IC101 : FUNCTION SWITCH
HEWZI ONLY
HE, HB ONLY
HE, HB
HEWZI
HE
HB
HEWZ ONLY
PHONO
AKB1100
HEWZI ONLY
C301
C302
2.2/50
HE, HB ONLY
HEWZI ONLY
A(1:9)
TX L
GND
TX R
TX GND
+5V
+12V
-5V
GND
N.C
N.C
CN4
To TUNER assembly CN4 (➜ P15 : HE, HB)
(➜ P48 : HEWZI)
DISP CLK
DISP DATA
AC
GND
AC
CD REQ/EN
S CLK
S DATA
TAPE REQ/EN
CENTER GND
CD R
GND
CD L
PB L
PB R
REC L
REC R
CN7
To PDC–P420
D712-
1
2
3
4
5
B
C

IC401 (PA0049)

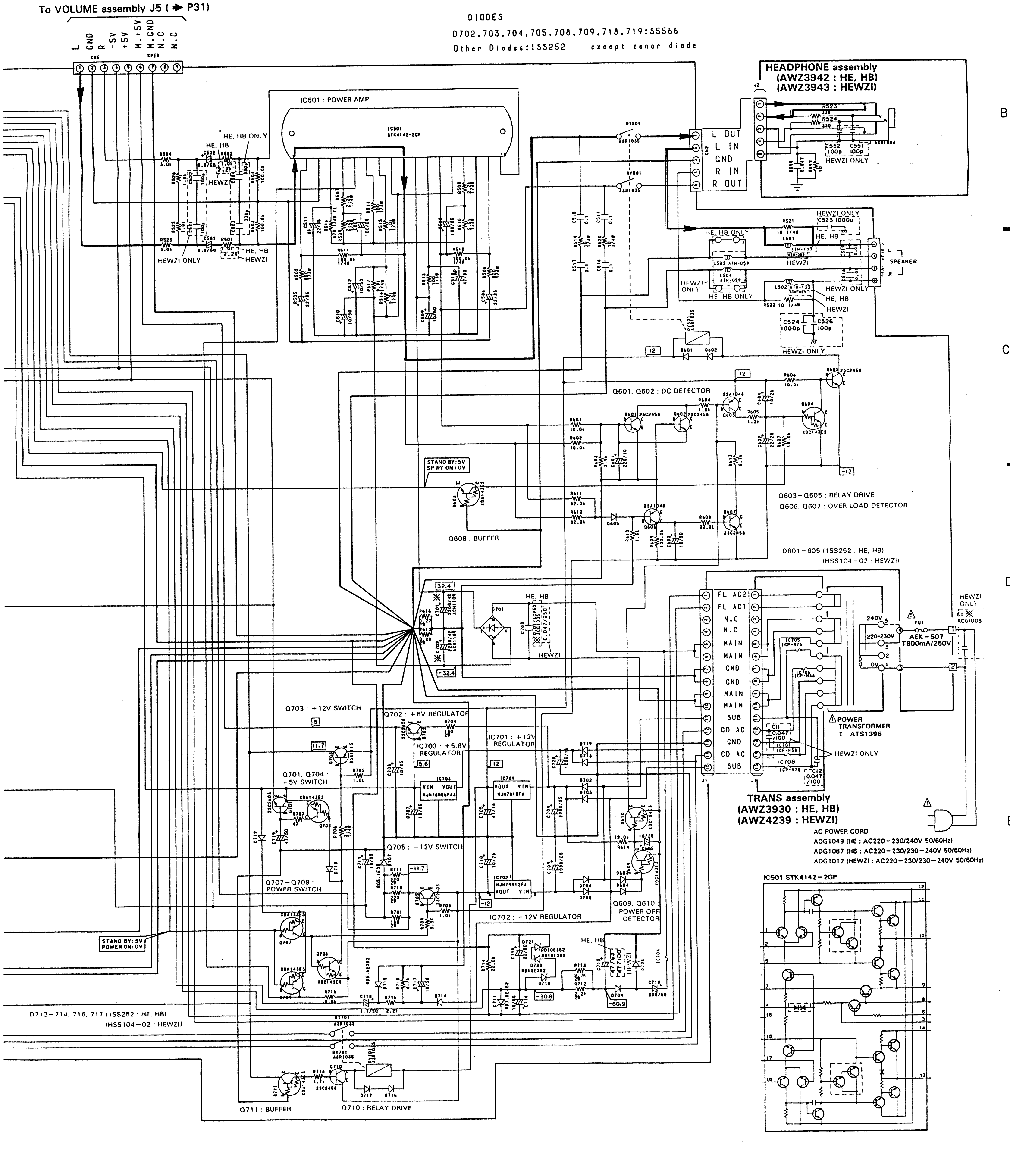
Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	4.7	11	0	21	0
2	0	12	0	22	0
3	0	13	0	23	0
4	0	14	0	24	0
5	0	15	−5.2	25	0
6	0	16		26	0
7	0	17		27	0
8	0	18		28	0
9	0	19		29	0
10	0	20		30	0

IC405 (LA3607)

Pin No.	Voltage	Pin No.	Voltage
1	−0.1	11	−0.1
2	−0.8	12	−0.8
3	−0.1	13	−0.1
4	−0.8	14	−0.8
5	−0.1	15	−0.1
6	−0.8	16	−0.8
7	−0.1	17	−0.8
8	−0.8	18	4.7
9	−0.1	19	0
10	−0.8	20	−5.2

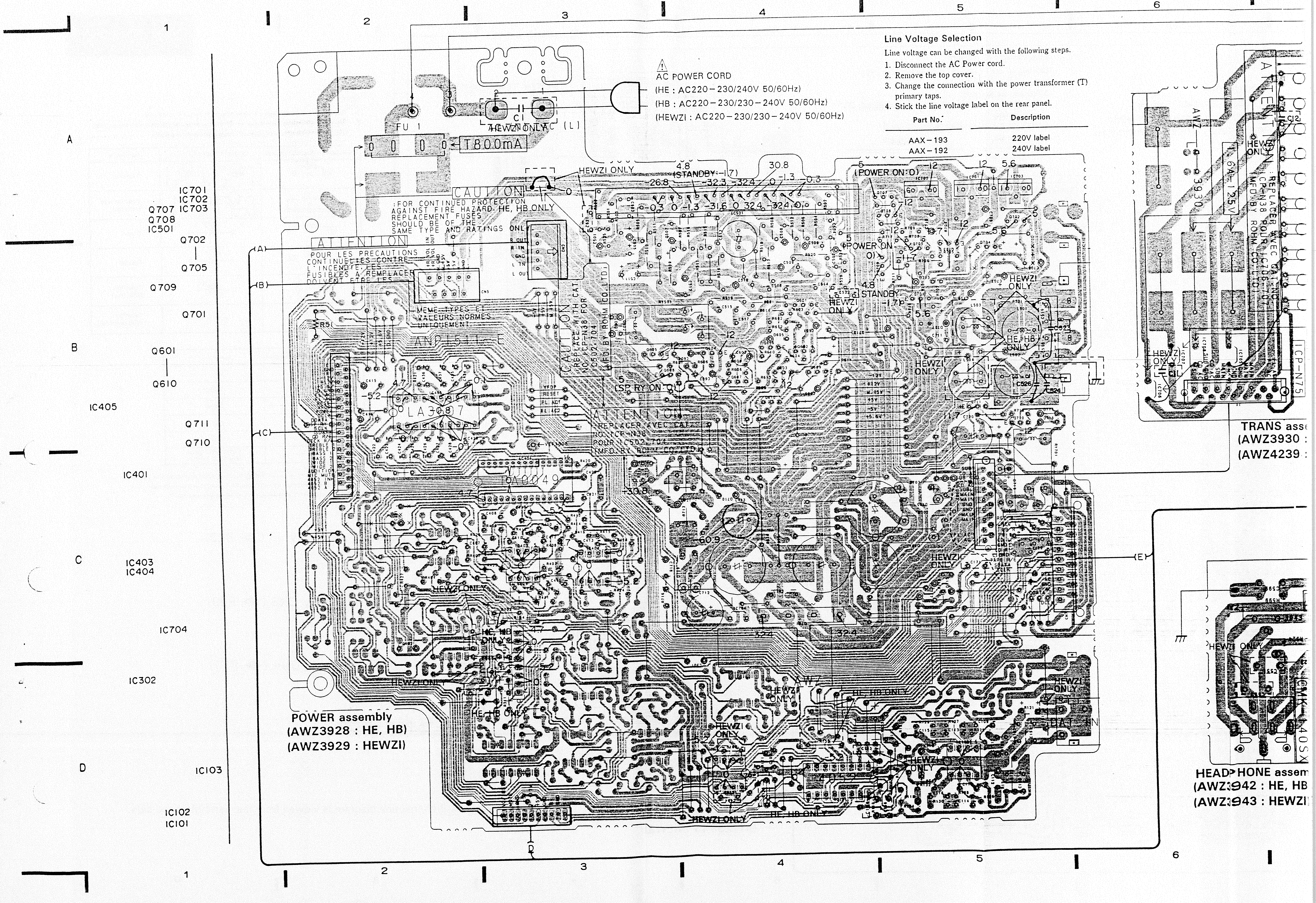
IC501 (STK4142−2GP)

Pin No.	Voltage	Pin No.	Voltage
1	−0.3	10	0
2	−0.3	11	32.4
3	0	12	30.8
4	−26.8	13	0
5	−1.3	14	−32.4
6	4.8 −1.7 (When STANDBY)	15	−1.3
7	−31.6	16	0
8	−32.3	17	−0.3
9	−32.5	18	−0.3



DIODES
D702.703.704.705.708.709.718.719:S5566
Other Diodes:1SS252 except zenor diode

To VOLUME assembly J5 (➡ P31)
L
GND
R
−5V
+5V
M.+5V
M.GND
N.C
N.C
CN5
XPE9
IC501 : POWER AMP
IC501
STK4142-2CP
HE, HB ONLY
HE, HB
HEWZI
HEWZI ONLY
R524
R523
R526
R525
R501
R502
R503
R504
C501
C502
C503
C504
C521
C522
R505
R506
R507
R508
R509
R510
R511
R512
R513
R514
R515
R516
R517
R518
C505
C506
C507
C508
C509
C510
C511
C512
RY501
ASR1035
L OUT
L IN
GND
R IN
R OUT
CN2
HEADPHONE assembly
(AWZ3942 : HE, HB)
(AWZ3943 : HEWZI)
J2
R523
330
R524
330
C552
100p
C551
100p
AKN1084
HEWZI ONLY
R521
10 1/4W
C523 1000p
L501
ATH-133
L503 ATH-059
L504 ATH-059
L502 ATH-133
R522 10 1/4W
C524
1000p
C526
100p
SPEAKER
L
R
12
D601
D602
Q601, Q602 : DC DETECTOR
Q601 2SC2458
Q602 2SC2458
Q603 2SA1048
Q604 XDC143ES
Q605 2SC2458
Q606 2SA1048
Q607 2SC2458
Q608 XDA143ES
R601
R602
R603
R604
R605
R606
R607
R608
R609
R610
R611
R612
R613
C601
C602
C603
C604
D605
−12
STAND BY:5V
SP RY ON:0V
Q608 : BUFFER
Q603−Q605 : RELAY DRIVE
Q606, Q607 : OVER LOAD DETECTOR
D601−605 (1SS252 : HE, HB)
(HSS104−02 : HEWZI)
32.4
−32.4
C701
C702
2200/42
R616
D701
C703
HE, HB
0.047/250
HEWZI
FL AC2
FL AC1
N.C
N.C
MAIN
MAIN
GND
GND
MAIN
MAIN
SUB
CD AC
GND
CD AC
SUB
J1
IC705
ICP-N75
IC706
ICP-N38
IC707
ICP-N38
IC708
ICP-N75
C11
0.047
/100
C12
0.047
/100
HEWZI ONLY
POWER
TRANSFORMER
T ATS1396
240V
220-230V
0V
FU1
AEK-507
T800mA/250V
HEWZI
ONLY
C1
ACG1003
TRANS assembly
(AWZ3930 : HE, HB)
(AWZ4239 : HEWZI)
AC POWER CORD
ADG1049 (HE : AC220−230/240V 50/60Hz)
ADG1087 (HB : AC220−230/230−240V 50/60Hz)
ADG1012 (HEWZI : AC220−230/230−240V 50/60Hz)
Q703 : +12V SWITCH
5
11.7
Q702 : +5V REGULATOR
IC703 : +5.6V
REGULATOR
5.6
IC703
VIN VOUT
NJM78M56FA3
IC701 : +12V
REGULATOR
12
IC701
VOUT VIN
NJM7812FA
Q701, Q704 :
+5V SWITCH
Q705 : −12V SWITCH
−11.7
IC702
NJM79M12FA
VOUT VIN
−12
IC702 : −12V REGULATOR
Q707−Q709 :
POWER SWITCH
Q609, Q610 :
POWER OFF
DETECTOR
HE, HB
47/63
47/100
HEWZI
IC704
C712
330/50
−30.8
−60.9
STAND BY: 5V
POWER ON: 0V
D712−714, 716, 717 (1SS252 : HE, HB)
(HSS104−02 : HEWZI)
RY701
ASR1035
Q711 : BUFFER
Q710 : RELAY DRIVE
IC501 STK4142−2GP
A
B
C
D
E
F
5
6
7
8
9


1
2
3
4
5
6
A
B
C
D
IC701
IC702
Q707 IC703
Q708
IC501
Q702
Q705
Q709
Q701
Q601
Q610
IC405
Q711
Q710
IC401
IC403
IC404
IC704
IC302
IC103
IC102
IC101
FU 1
C1
HEWZI ONLY
AC (L)
T800mA
CAUTION
:FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD. HE, HB ONLY
REPLACEMENT FUSES
SHOULD BE OF THE
SAME TYPE AND RATINGS ONLY
ATTENTION
POUR LES PRECAUTIONS
CONTINUELLES CONTRE
L'INCENDIE, LES
FUSIBLES A REMPLACER
DOIVENT ETRE
MEME TYPES ET
VALEURS NORMES
UNIQUEMENT
HEWZI ONLY
4.8
(STANDBY:-1.7)
30.8
-26.8
-32.3
-32.4
0
-1.3
-0.3
5
(POWER ON:0)
-12
12
5.6
CAUTION
REPLACE WITH CAT.
NO.ICP-N38 FOR
IC502,704
MFD.BY ROHM CO.,LTD.
ATTENTION
REPLACER AVEC CAT.
NO.ICP-N38
POUR IC502,704
MFD.BY ROHM CO.,LTD.
AN7511
LA3607
TA0049
5
(SP RY ON:0)
HE, HB ONLY
HEWZI ONLY
60.9
32.4
AWZ
BAT IN
(A)
(B)
(C)
(D)
(E)
AWZ 3930
1.25V
ATTENTION
REPLACER AVEC CAT.NO.
ICP-N38 POUR IC706,707
MFD.BY ROHM CO.,LTD.
ICP-N75
CMK-140SX

Line Voltage Selection

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the connection with the power transformer (T) primary taps.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX−193	220V label
AAX−192	240V label

⚠ AC POWER CORD
(HE : AC220−230/240V 50/60Hz)
(HB : AC220−230/230−240V 50/60Hz)
(HEWZI : AC220−230/230−240V 50/60Hz)

POWER assembly
(AWZ3928 : HE, HB)
(AWZ3929 : HEWZI)

TRANS asse
(AWZ3930 :
(AWZ4239 :

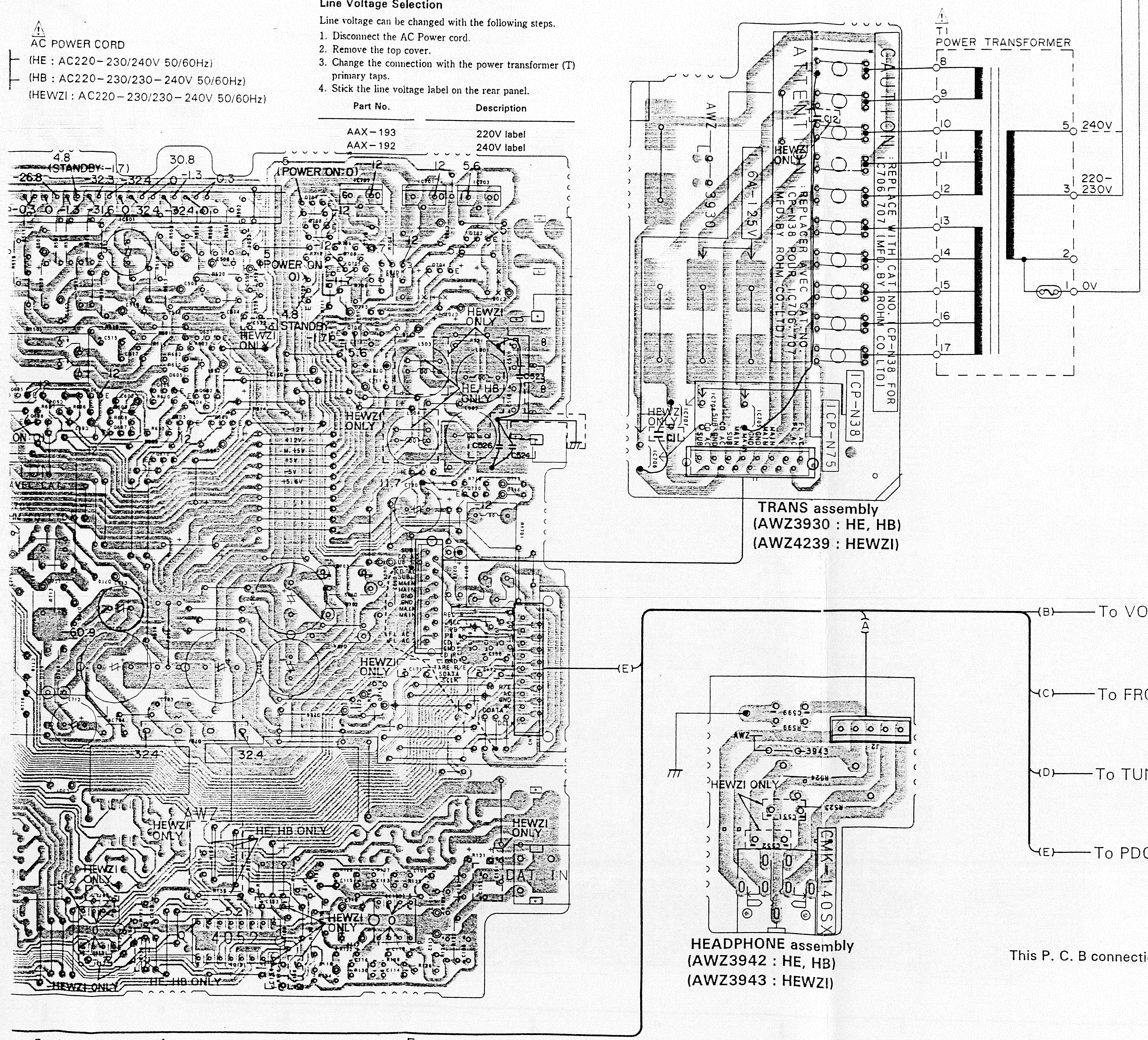
HEAD HONE assem
(AWZ 942 : HE, HB
(AWZ 943 : HEWZI

Line Voltage Selection

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the connection with the power transformer (T) primary taps.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX−193	220V label
AAX−192	240V label


⚠
AC POWER CORD
(HE : AC220−230/240V 50/60Hz)
(HB : AC220−230/230−240V 50/60Hz)
(HEWZI : AC220−230/230−240V 50/60Hz)
⚠
T1
POWER TRANSFORMER
8
9
10
11
12
13
14
15
16
17
5 240V
3 220−230V
2
1 0V
4.8 (STANDBY: −17)
30.8
−26.8
−32.3
−32.4
−1.3
−0.3
−31.6
5 (POWER ON: 0)
12
5.6
4.8 STANDBY: −17
HEWZI ONLY
HE, HB ONLY
11.7
324
32.4
AWZ
HE, HB ONLY
DAT IN
405
CAUTION: REPLACE WITH CAT. NO. CP-N38 FOR IC706, 707 (MFD. BY ROHM CO., LTD)
ATTENTION: REPLACER AVEC CAT. NO. CP-N38 POUR IC706, 707 MFD. BY ROHM CO., LTD
ICP-N38
ICP-N75
6A−125V
AWZ−3930
HEWZI ONLY
TRANS assembly
(AWZ3930 : HE, HB)
(AWZ4239 : HEWZI)
A
E
HEWZI ONLY
AWZ−3943
CMK−140SX
HEADPHONE assembly
(AWZ3942 : HE, HB)
(AWZ3943 : HEWZI)
4
5
6
7
8

(B) To VOLUME assembly J5 (➡ P28)

(C) To FRONT assembly CN3 (➡ P29)

(D) To TUNER assembly CN4 (➡ P11)

(E) To PDC−P320

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

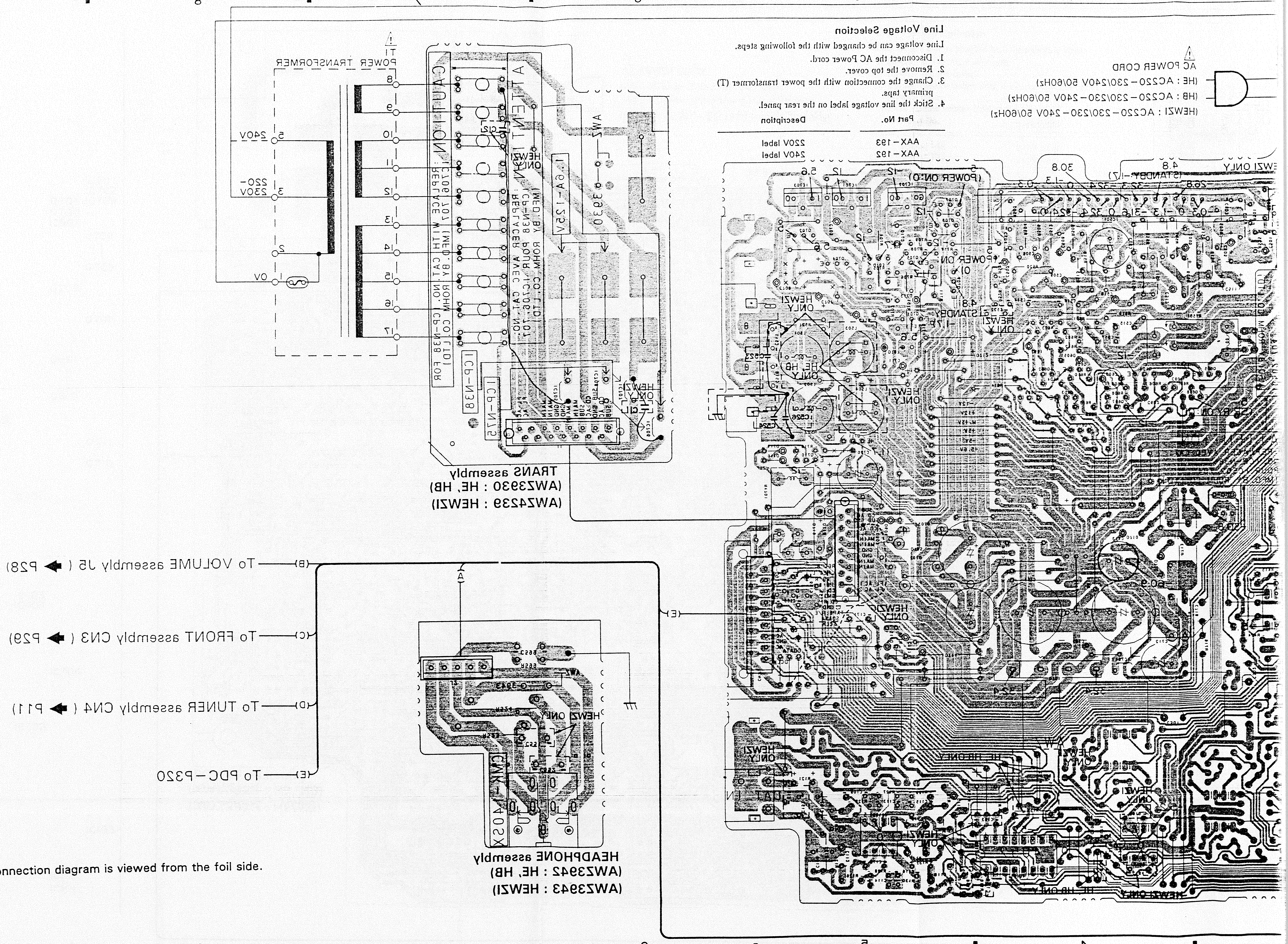
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarized)
C518		Capacitor (Non-polarized)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capactor terminal marked with ◎ (double circles) shows negatine terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

This P. C. B connection diagram is viewed from the parts mounted side.


T1
POWER TRANSFORMER
240V
220-230V
0V
CAUTION: REPLACE WITH CAT. NO. ICP-N38 FOR IC706, IC707 (MFD. BY ROHM CO., LTD.)
ATTENTION: REPLACER AVEC CAT. NO. ICP-N38 POUR IC706, IC707 (FAB. PAR ROHM CO., LTD.)
AWZ-3930
HEWZI ONLY
ICP-N38
ICP-N75
AC POWER CORD
(HE : AC220-230/240V 50/60Hz)
(HB : AC220-230/230-240V 50/60Hz)
(HEWZI : AC220-230/230-240V 50/60Hz)
POWER ON: 0
STANDBY: -17
HE, HB ONLY
HEWZI ONLY
TRANS assembly
(AWZ3930 : HE, HB)
(AWZ4239 : HEWZI)
To VOLUME assembly J5 (◀ P28)
To FRONT assembly CN3 (◀ P29)
To TUNER assembly CN4 (◀ P11)
To PDC-P320
HEADPHONE assembly
(AWZ3942 : HE, HB)
(AWZ3943 : HEWZI)
A
B
C
D
E
A
B
C
D
4
5
6
7
8
9

Line Voltage Selection

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the connection with the power transformer (T) primary taps.
4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

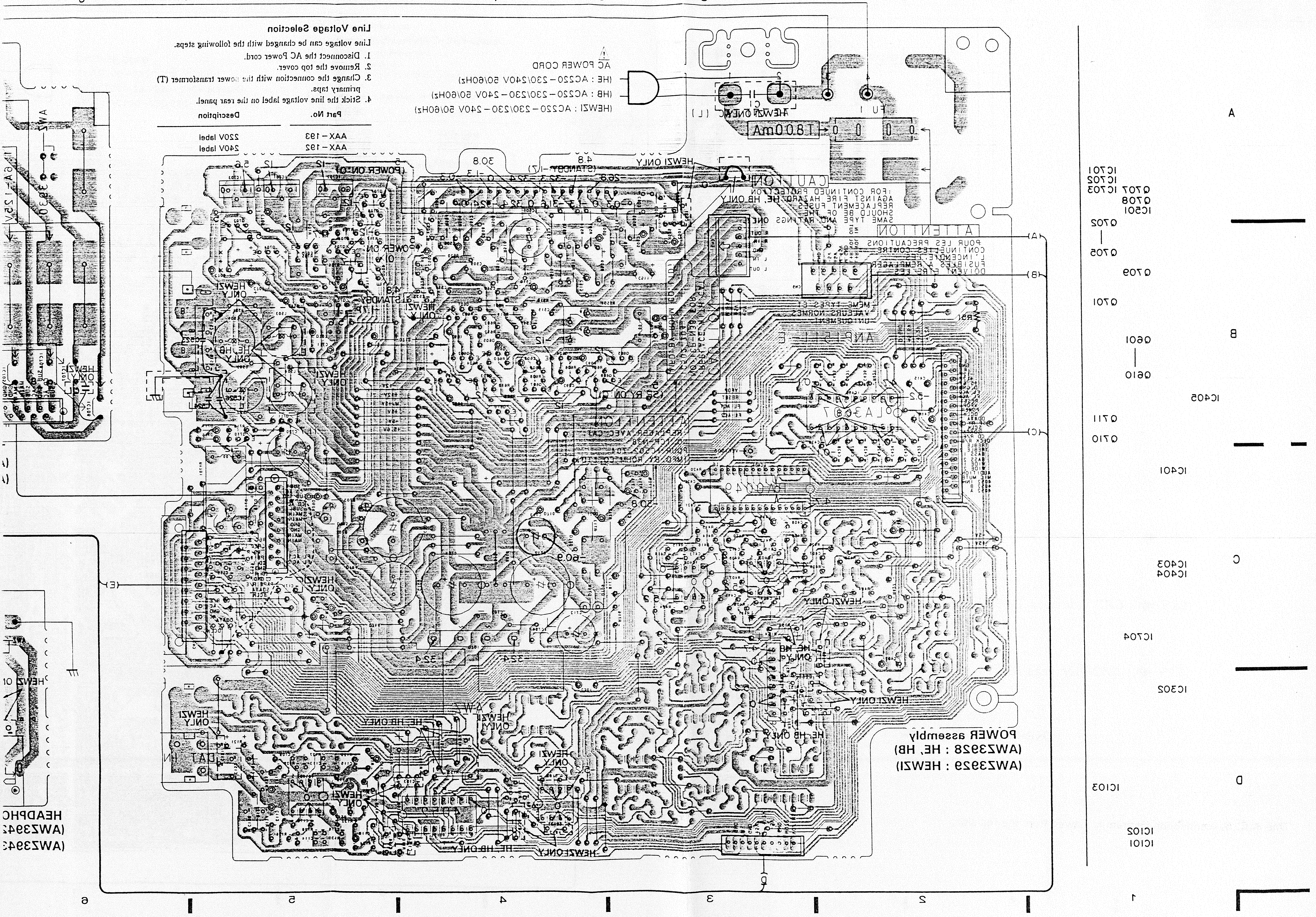
This P. C. B. connection diagram is viewed from the foil side.

Line Voltage Selection

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the connection with the power transformer (T) primary taps.
4. Stick the line voltage label on the rear panel.

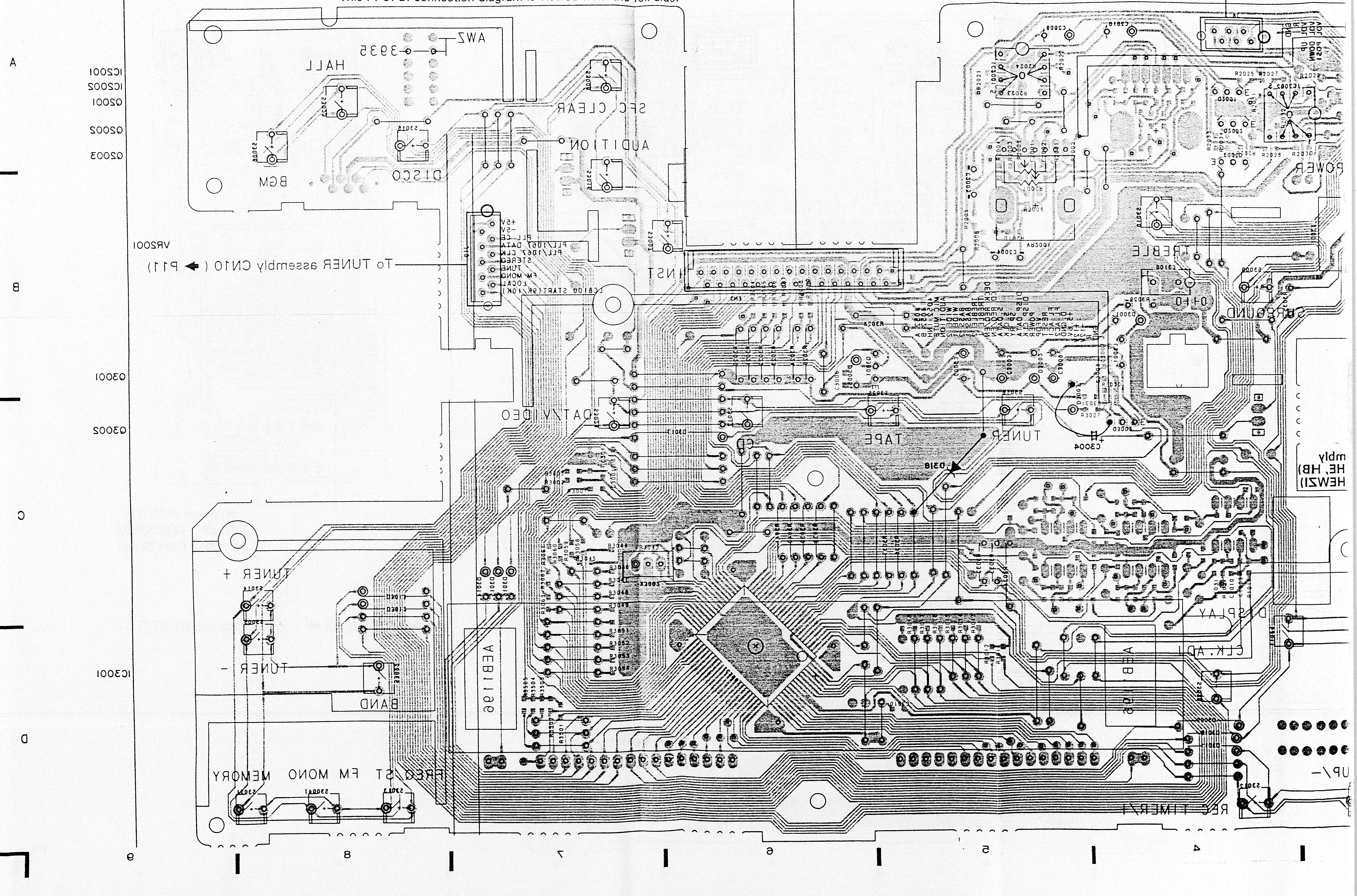
Part No.	Description
AAX-193	220V label
AAX-192	240V label



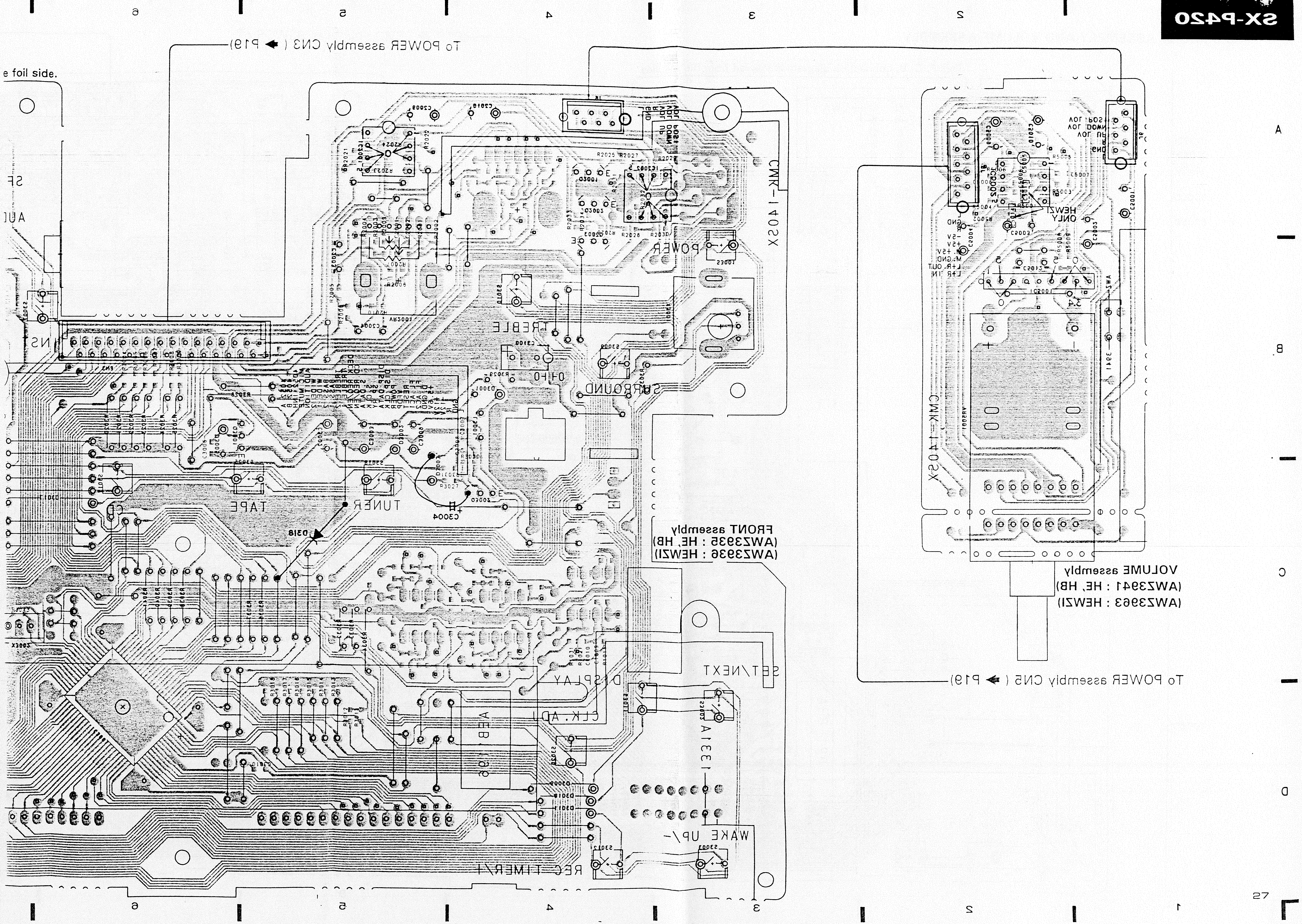
AC POWER CORD
(HE : AC220 – 230/240V 50/60Hz)
(HB : AC220 – 230/230 – 240V 50/60Hz)
(HEWZI : AC220 – 230/230 – 240V 50/60Hz)
HEWZI ONLY
C1
FU1
T800mA
CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACEMENT FUSES SHOULD BE OF THE SAME TYPE AND RATINGS ONLY
HE, HB ONLY
ATTENTION: POUR LES PRECAUTIONS CONTINUELLES CONTRE L'INCENDIE, LES FUSIBLES A REMPLACER DOIVENT ETRE LES MEME TYPES ET VALEURS NORMES UNIQUEMENT
POWER ON
STANDBY
HE, HB ONLY
HEWZI ONLY
A
B
C
D
E
POWER assembly
(AWZ3928 : HE, HB)
(AWZ3929 : HEWZI)
HEADPHO
(AWZ394
(AWZ394
IC701
IC702
IC703
Q707
Q708
IC501
Q702
Q705
Q709
Q701
Q601
Q610
IC405
Q711
Q710
IC401
IC403
IC404
IC704
IC302
IC103
IC102
IC101
1
2
3
4
5
6

3.3 FRONT ASSEMBLY AND VOLUME ASSEMBLY

This P. C. B. connection diagram is viewed from the foil side.

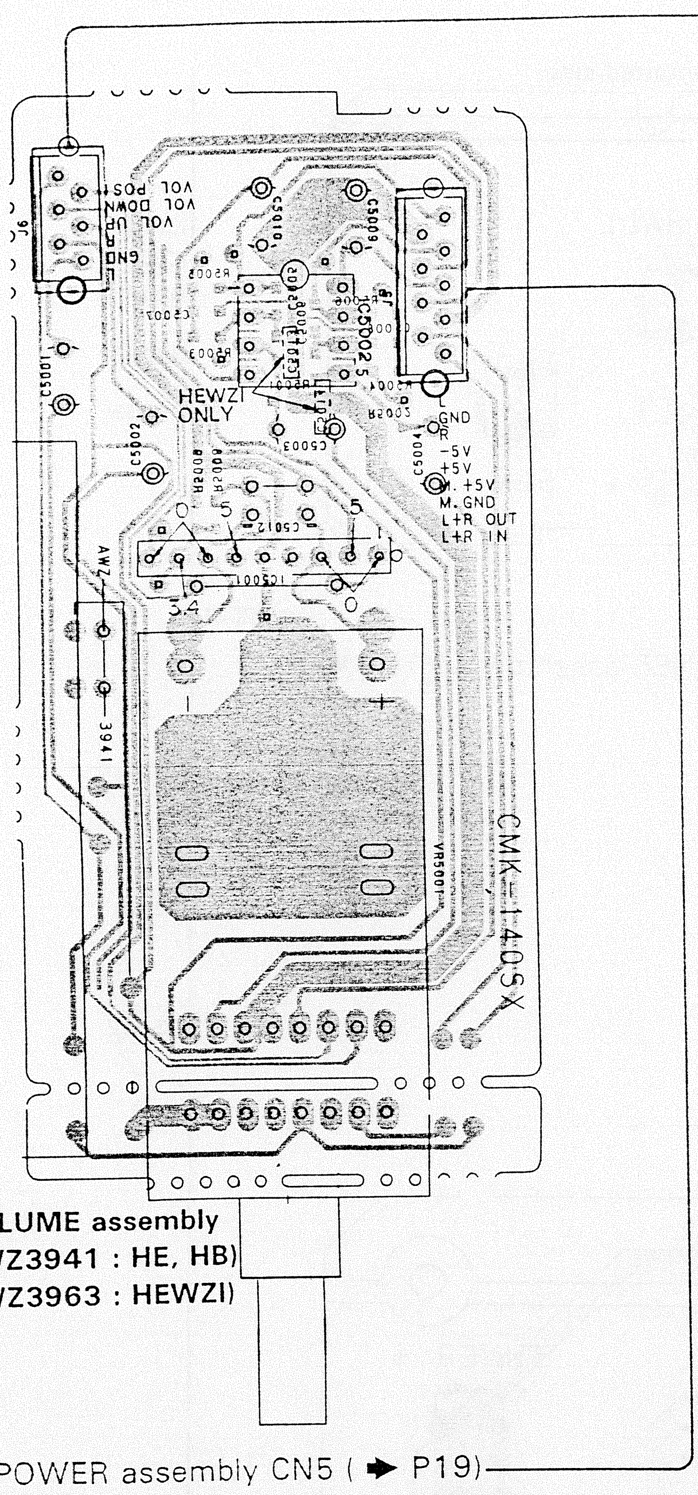

To POWER assembly CN3 (➡ P19)
To TUNER assembly CN10 (➡ P11)
A
B
C
D
IC2001
IC2002
Q2001
Q2002
Q2003
VR2001
Q3001
Q3002
IC3001
AWZ
3935
HALL
BGM
DISCO
SFC CLEAR
AUDITION
INST
DATA/VIDEO
CD
TAPE
TUNER
D318
C3004
TREBLE
SURROUND
POWER
DISPLAY
CLK. ADJ
A - B
TUNER +
TUNER -
BAND
AEB1196
MEMORY
FM MONO
FREQ ST
REC TIMER/I
CN3
+5V
-5V
PLL CE
PLL/1067 DATA
PLL/1067 CLK
STEREO
TUNE
FM MONO
LOCAL
LC8100 START(9K/10K)

e foil side.


6
5
4
3
2
1
A
B
C
D
To POWER assembly CN3 (→ P19)
To POWER assembly CN5 (→ P19)
TREBLE
SURROUND
POWER
HEWZI ONLY
TAPE
TUNER
DISPLAY
CLK. ADJ
SET/NEXT
WAKE UP/–
REC TIMER/1
CMX-1405X

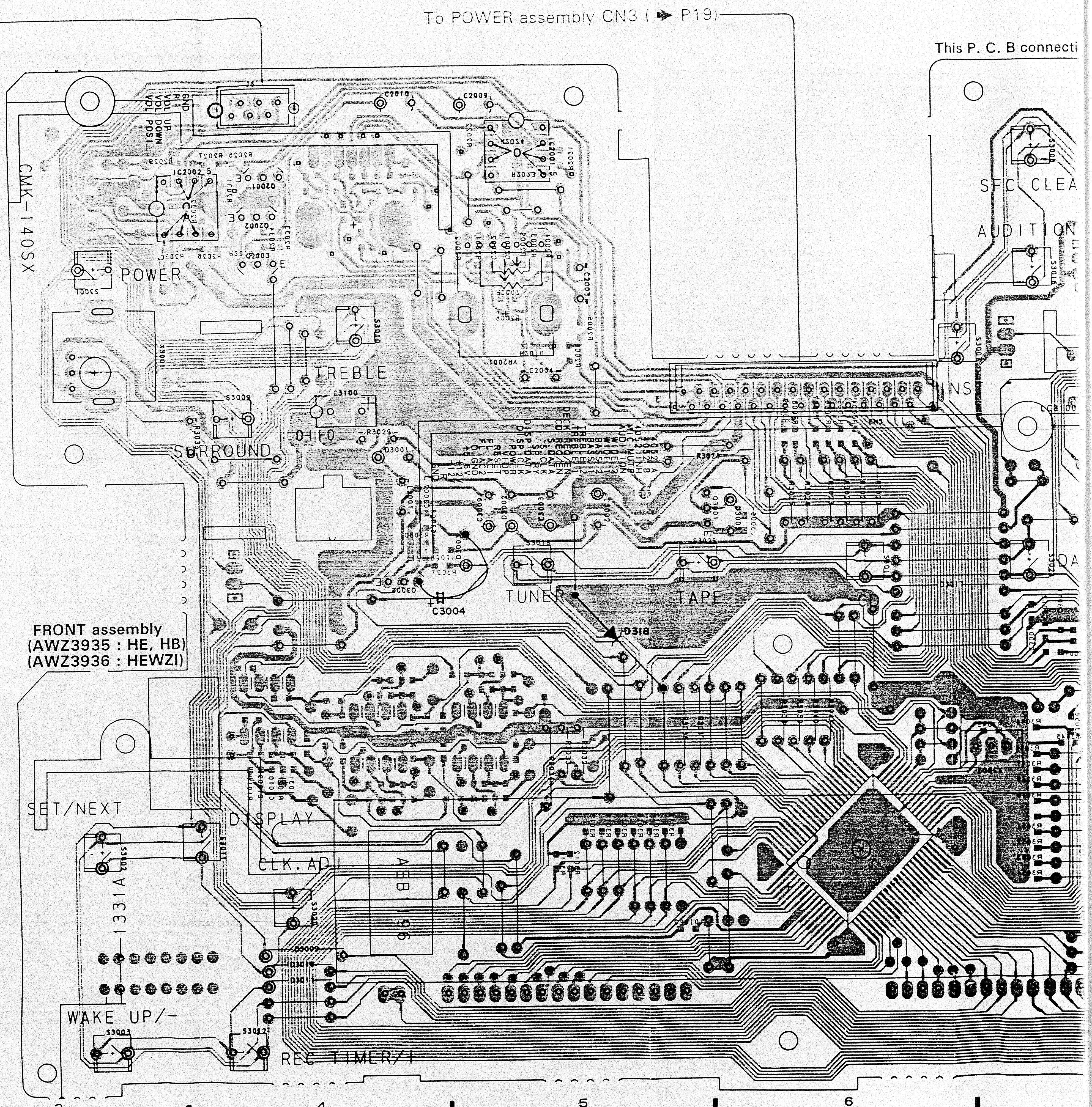
FRONT assembly
(AWZ3935 : HE, HB)
(AWZ3936 : HEWZI)

VOLUME assembly
(AWZ3941 : HE, HB)
(AWZ3963 : HEWZI)


J6
GND
VOL UP
VOL DOWN
VOL POS
HEWZI ONLY
GND
-5V
+5V
M.+5V
M.GND
L+R OUT
L+R IN
AWZ
3941
CMK-140SX
VR5001

VOLUME assembly
(AWZ3941 : HE, HB)
(AWZ3963 : HEWZI)

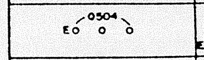
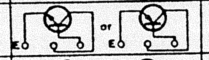
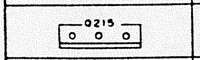
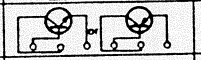
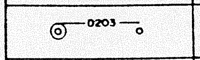
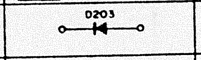
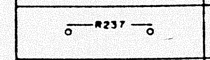
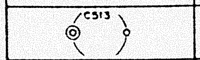
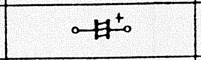
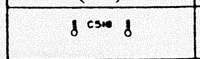
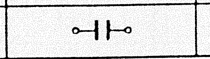
To POWER assembly CN5 (➜ P19)


To POWER assembly CN3 (➜ P19)
This P. C. B connecti
CMK-140SX
POWER
TREBLE
SURROUND
SFC CLEA
AUDITION
TUNER
TAPE
D318
C3004
SET/NEXT
DISPLAY
CLK. ADJ
AEB 1196
1331A
WAKE UP/-
REC TIMER/
S3003
S3012
S3002
S3001
S3009
C3100

FRONT assembly
(AWZ3935 : HE, HB)
(AWZ3936 : HEWZI)

NOTE

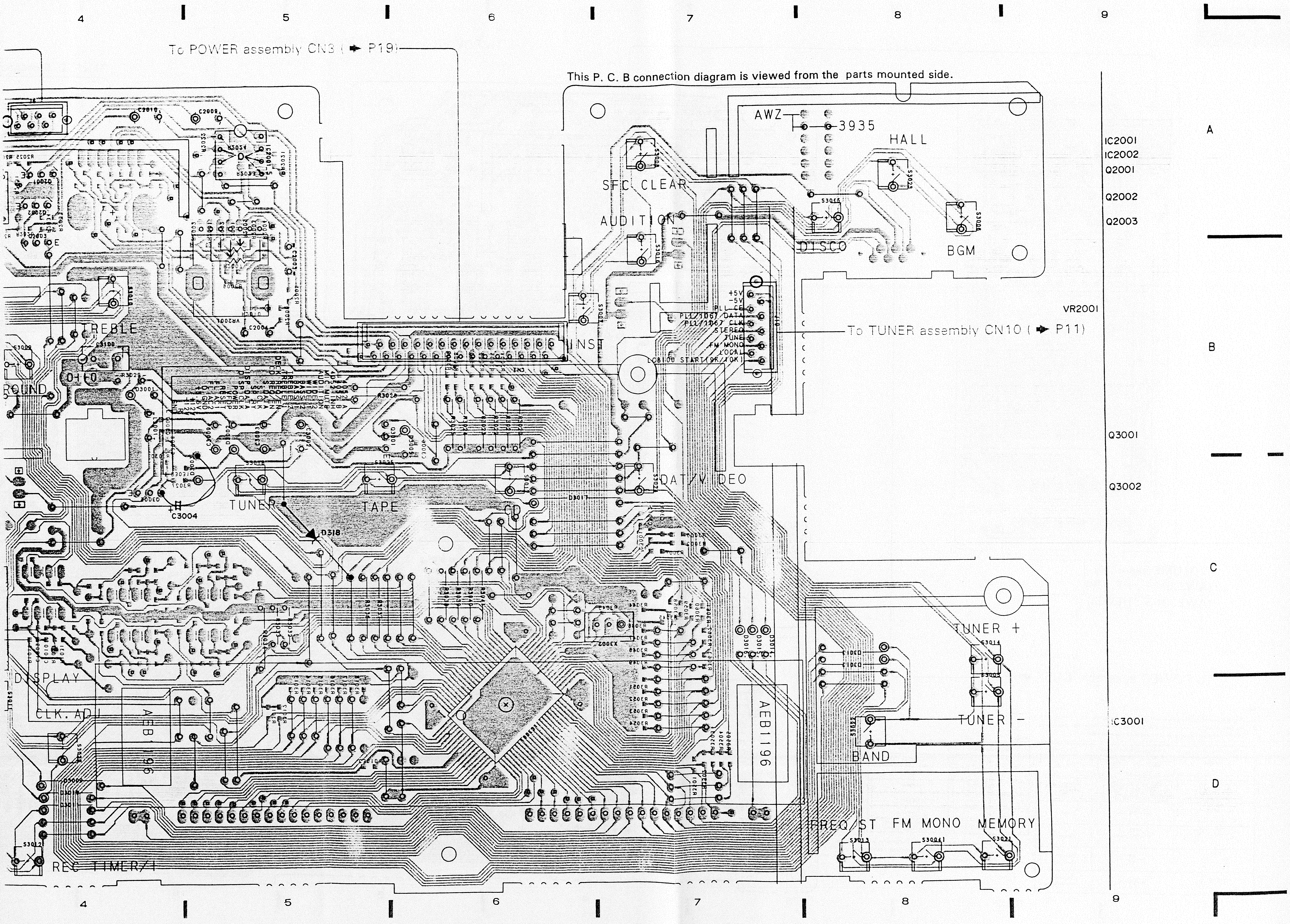
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarized)
		Capacitor (Non-polarized)

Others

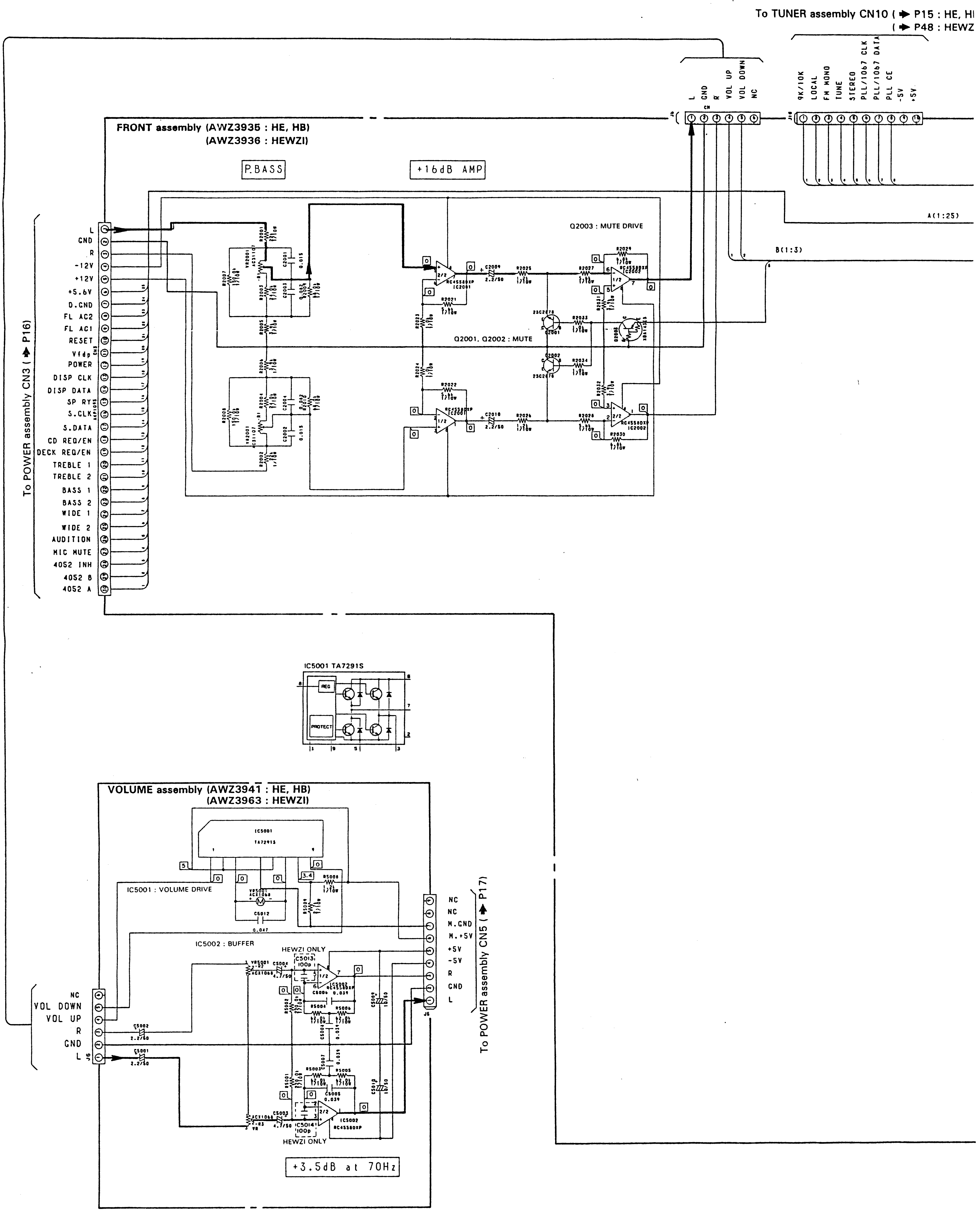
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

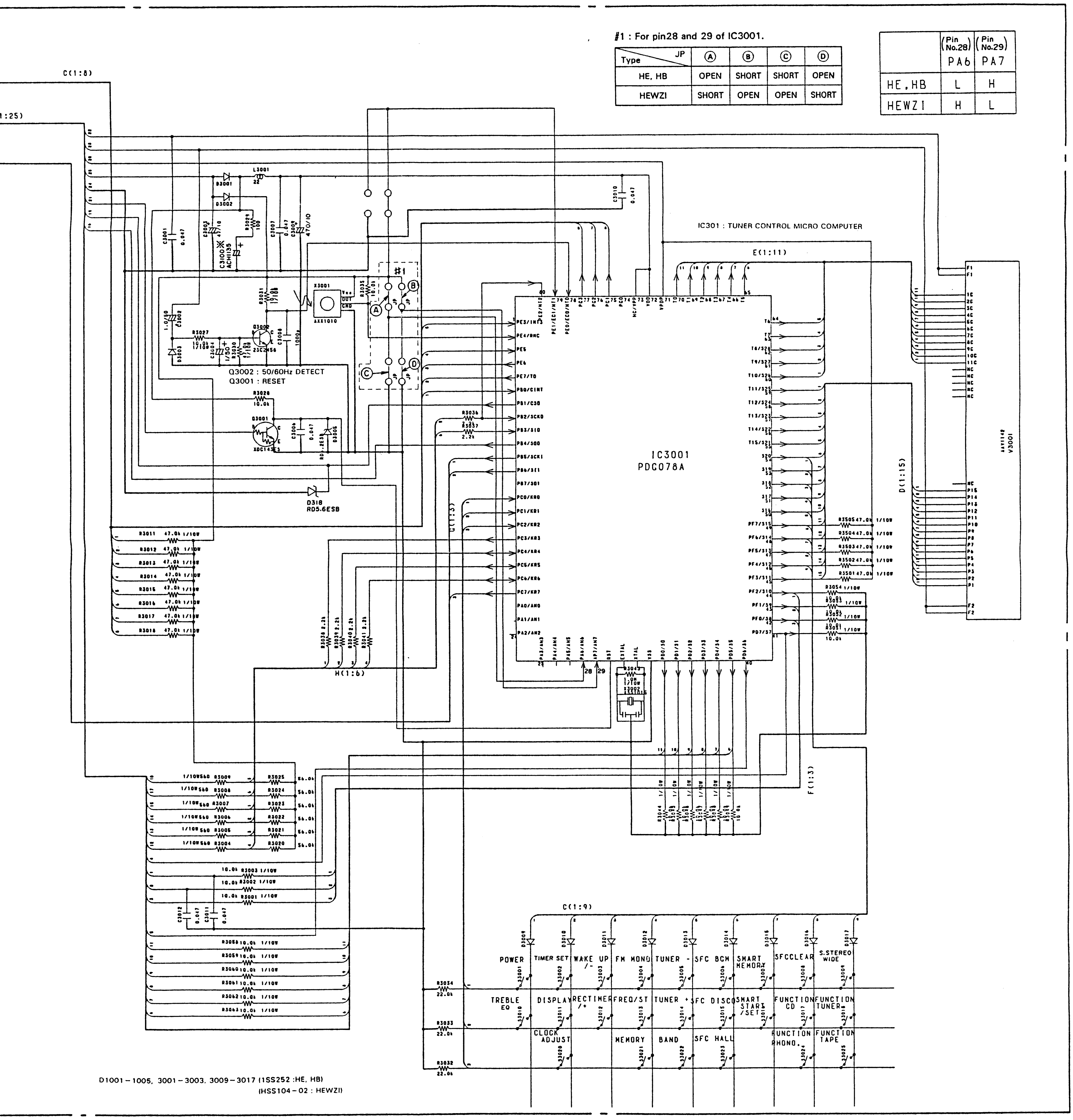


This P. C. B connection diagram is viewed from the parts mounted side.

4
5
6
7
8
9
To POWER assembly CN3 (➡ P19)
AWZ
3935
HALL
SFC CLEAR
AUDITION
DISCO
BGM
TREBLE
INST
ROUND
+5V
-5V
PLL CE
PLL/1067 DATA
PLL/1067 CLK
STEREO
TUNE
FM MONO
LOCAL
LC8100 START(19K//10K)
To TUNER assembly CN10 (➡ P11)
TUNER
TAPE
CD
DAT/VIDEO
D318
C3004
C3100
D3017
IC3002
AEB1196
DISPLAY
CLK. ADJ
TUNER +
TUNER -
BAND
FREQ/ST
FM MONO
MEMORY
REC TIMER/I
S3013
S30041
S3021
S3014
S3005
S3012
S3016
S3023
S3006
S3010
IC2001
IC2002
Q2001
Q2002
Q2003
VR2001
Q3001
Q3002
IC3001
A
B
C
D


To TUNER assembly CN10 (➡ P15 : HE, HI
(➡ P48 : HEWZ
L
GND
R
VOL UP
VOL DOWN
NC
CN
J6
J10
9K/10K
LOCAL
FM MONO
TUNE
STEREO
PLL/1067 CLK
PLL/1067 DATA
PLL CE
-5V
+5V
FRONT assembly (AWZ3935 : HE, HB)
(AWZ3936 : HEWZI)
P.BASS
+16dB AMP
A(1:25)
B(1:3)
Q2003 : MUTE DRIVE
Q2001, Q2002 : MUTE
To POWER assembly CN3 (➡ P16)
L
GND
R
-12V
+12V
+5.6V
D.GND
FL AC2
FL AC1
RESET
Vfdp
POWER
DISP CLK
DISP DATA
SP RY
S.CLK
S.DATA
CD REQ/EN
DECK REQ/EN
TREBLE 1
TREBLE 2
BASS 1
BASS 2
WIDE 1
WIDE 2
AUDITION
MIC MUTE
4052 INH
4052 B
4052 A
R2001
R2002
R2003
R2004
R2005
R2006
R2007
R2008
VR2001
C2001
C2002
C2003
C2004
0.015
IC2001
RC4558DXP
C2009
C2010
2.2/50
R2021
R2022
R2023
R2024
R2025
R2026
R2027
R2028
R2029
R2030
R2031
R2032
R2033
R2034
IC2002
2SC2878
Q2001
Q2002
Q2003
2SA1433
IC5001 TA7291S
REG
PROTECT
VOLUME assembly (AWZ3941 : HE, HB)
(AWZ3963 : HEWZI)
IC5001
TA7291S
IC5001 : VOLUME DRIVE
VR5001
ACX1068
R5008
R5009
C5012
0.047
IC5002 : BUFFER
HEWZI ONLY
C5013
100p
C5014
100p
C5001
C5002
2.2/50
C5003
C5004
4.7/50
C5005
C5006
0.039
C5007
C5008
0.039
C5009
C5010
16/50
R5001
R5002
R5003
R5004
R5005
R5006
IC5002
RC4558DXP
+3.5dB at 70Hz
NC
VOL DOWN
VOL UP
R
GND
L
J6
NC
NC
M.GND
M.+5V
+5V
-5V
R
GND
L
J5
To POWER assembly CN5 (➡ P17)
B
C
D
E
F

HE, HB)
HEWZI)



C(1:8)
1:25)
L3001
D3001
D3002
C3001 0.047
C3003 47/10
C3100 ACH1135
R3029 100
C3007 0.047
C3009 470/10
C3010 0.047
X3001 AXX1010
R3035 10.0k
R3021
C3002 1.0/50
R3027 10.0k 1/10W
C3004
Q3002 2SC2458
C3008 1000p
D3003
R3028 10.0k
Q3001 XDC143ES
C3006 0.047
D3005
Q3002 : 50/60Hz DETECT
Q3001 : RESET
D318 RD5.6ESB
R3036
R3037 2.2k
IC301 : TUNER CONTROL MICRO COMPUTER
E(1:11)
IC3001
PDG078A
D(1:15)
V3001
AAV1142
H(1:6)
F(1:3)
C(1:9)
X3002
POWER
TIMER SET
WAKE UP /-
FM MONO
TUNER -
SFC BGM
SMART MEMORY
SFC CLEAR
S.STEREO WIDE
TREBLE EQ
DISPLAY
RECTIMER /+
FREQ/ST
TUNER +
SFC DISCO
SMART START /SET
FUNCTION CD
FUNCTION TUNER
CLOCK ADJUST
MEMORY
BAND
SFC HALL
FUNCTION PHONO
FUNCTION TAPE
R3034 22.0k
R3033 22.0k
R3032 22.0k

#1 : For pin28 and 29 of IC3001.

Type \ JP	Ⓐ	Ⓑ	Ⓒ	Ⓓ
HE, HB	OPEN	SHORT	SHORT	OPEN
HEWZI	SHORT	OPEN	OPEN	SHORT

	(Pin No.28) PA6	(Pin No.29) PA7
HE.HB	L	H
HEWZI	H	L

D1001－1005, 3001－3003, 3009－3017 (1SS252 :HE, HB)
(HSS104－02 : HEWZI)

4. PCB PARTS LIST

NOTES:

- *Part without part number cannot be supplied.*
- *Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω 56×10^1 561........................RD1/8PM 5 6 1 J
47kΩ 47×10^3 473........................RD1/4PS 4 7 3 J
0.5Ω 0R5..RN2H 0 R 5 K
1Ω 010..RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ 562×10^1 5621........................RN1/4SR 5 6 2 1 F

LIST OF ASSEMBLIES

Mark	No.	Description	Parts No.
●		POWER ASSEMBLY	AWZ3928
●		TRANS ASSEMBLY	AWZ3930
●		FRONT ASSEMBLY	AWZ3935
●		TUNER ASSEMBLY	AWZ3938
●		VOLUME ASSEMBLY	AWZ3941
●		HEADPHONE ASSEMBLY	AWZ3942

● POWER ASSEMBLY (AWZ3928)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC101	LOGIC IC	MC14052BCP
	IC102, 103	OP−AMP IC	RC4558DXP
	IC302	OP−AMP IC	NJM4558LD
	IC401	SOUND PROCESSOR IC	PA0049
	IC403, 404	OP−AMP IC	RC4558DXP
	IC405	GEQ IC	LA3607
	IC501	AUDIO IC	STK4142−2GP
	IC701	REGULATOR IC	NJM7812FAS
	IC702	REGULATOR IC	NJM79M12FA
	IC703	REGULATOR IC	NJM78M56FAS
	IC704	IC PROTECTOR	ICP−N25
	Q601, 602	TRANSISTOR	2SC2458
	Q603	TRANSISTOR	2SA1048
	Q604	TRANSISTOR	XDC143ES
	Q605	TRANSISTOR	2SC2458
	Q606	TRANSISTOR	2SA1048
	Q607	TRANSISTOR	2SC2458
	Q608, 609	TRANSISTOR	XDA143ES
	Q610	TRANSISTOR	XDC124ES
	Q701	TRANSISTOR	2SC2603
	Q702	TRANSISTOR	2SC2458
	Q703	TRANSISTOR	2SA1115
	Q704	TRANSISTOR	XDA143ES
	Q705	TRANSISTOR	2SC2603
	Q707−709	TRANSISTOR	XDA143ES
	Q710	TRANSISTOR	2SC2458
	Q711	TRANSISTOR	XDA143ES
	D601−605	DIODE	1SS252
	D701	DIODE	RBV402
	D702−705	DIODE	S5566
	D707	ZENER DIODE	RD5.1ESB
	D708, 709	DIODE	S5566
	D710	ZENER DIODE	RD10ESB2
	D711	ZENER DIODE	RD7.5ESB2
	D712−714	DIODE	1SS252
	D715	ZENER DIODE	RD5.6ESB
	D716, 717	DIODE	1SS252
	D718, 719	DIODE	S5566
	D720, 721	ZENER DIODE	RD10ESB2

RELAIES

Mark	No.	Description	Parts No.
	RY501, 701	RELAY	ASR1035

COILS

Mark	No.	Description	Parts No.
	L501, 502	COIL	ATH−133

CAPACITORS

Mark	No.	Description	Parts No.
	C103, 104	CERAMIC CAPACITOR	CCCSL101J50
	C107	CERAMIC CAPACITOR	CCDSL101J50
	C108−110	CERAMIC CAPACITOR	CCCSL101J50
	C111, 112	ELECTR. CAPACITOR	CEAS2R2M50
	C113, 114	CERAMIC CAPACITOR	CKCYB152K50
	C115, 116	CERAMIC CAPACITOR	CKCYB562K50
	C117, 118	ELECTR. CAPACITOR	CEAS2R2M50
	C119, 120	ELECTR. CAPACITOR	CEAS470M10
	C301, 302	ELECTR. CAPACITOR	CEAS2R2M50
	C401, 402	ELECTR. CAPACITOR	CEAS2R2M50
	C407, 408	CERAMIC CAPACITOR	CKCYB682K50
	C409, 410	CERAMIC CAPACITOR	CKCYB102K50
	C411, 412	CERAMIC CAPACITOR	CKCYB562K50
	C413	CERAMIC CAPACITOR	CKCYX223M25
	C414	AUDIO FILM CAPACITOR	CFTXA474J50
	C415, 416	ELECTR. CAPACITOR	CEAS2R2M50
	C419	ELECTR. CAPACITOR	CEASR47M50
	C420	ELECTROLYTIC CAPACIT	CEAS6R8M50
	C421	CERAMIC CAPACITOR	CKCYX104M25
	C422	CERAMIC CAPACITOR	CKCYB182K50
	C423	CERAMIC CAPACITOR	CKCYX273M25
	C424	CERAMIC CAPACITOR	CKCYB102K50
	C425	CERAMIC CAPACITOR	CKCYX153M25
	C426	CERAMIC CAPACITOR	CKCYB472K50
	C427	CERAMIC CAPACITOR	CKCYX683M25
	C428	CERAMIC CAPACITOR	CKCYB272K50
	C429	CERAMIC CAPACITOR	CKCYX393M25
	C434	CERAMIC CAPACITOR	CKCYB561K50
	C435	CERAMIC CAPACITOR	CKCYB822K50
	C436	CERAMIC CAPACITOR	CKCYB561K50
	C437	CERAMIC CAPACITOR	CKCYB272K50
	C501, 502	ELECTR. CAPACITOR	CEAS2R2M50
	C503, 504	CERAMIC CAPACITOR	CKCYB331K50
	C505, 506	ELECTR. CAPACITOR	CEAS220M25
	C507, 508	ELECTR. CAPACITOR	CEAS101M25
	C509, 510	ELECTR. CAPACITOR	CEAS100M50
	C511	ELECTROLYTIC CAPACIT	CEANP220M35
	C512	ELECTR. CAPACITOR	CEAS100M50
	C513	ELECTROLYTIC CAPACIT	CEANP470M50
	C514−517	CERAMIC CAPACITOR	CKCYX104M25
	C601	ELECTR. CAPACITOR	CEAS221M10
	C602	ELECTR. CAPACITOR	CEAS220M25
	C603, 604	ELECTR. CAPACITOR	CEAS100M50
	C605	ELECTR. CAPACITOR	CEAS100M25
	C701, 702	ELECTROLYTIC CAPACIT (2200/42)	ACH1109
	C703	CKA (0.01/AC150V)	ACG1005
	C704	ELECTR. CAPACITOR	CEAS222M25
	C705	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C707, 708	ELECTR. CAPACITOR	CEAS100M25
	C709	ELECTR. CAPACITOR	CEAS102M25
	C710, 711	ELECTROLYTIC CAPACIT	CEHAQ100M25
	C712	ELECTROLYTIC CAPACIT	CEAS331M50
	C713	ELECTROLYTIC CAPACIT	CEAS470M63
	C715	ELECTROLYTIC CAPACIT	CEHAQ220M50
	C716	ELECTR. CAPACITOR	CEHAQ100M50
	C717	ELECTR. CAPACITOR	CEAS100M50
	C718	ELECTR. CAPACITOR	CEAS4R7M50
	C719	ELECTROLYTIC CAPACIT	CEHAQ470M50
	C720	ELECTR. CAPACITOR	CEAS102M16

RESISTORS

Mark	No.	Description	Parts No.
	R503, 504	CARBON FILM RESISTOR	RD1/4PM104J
	R505, 506	CARBON FILM RESISTOR	RD1/4PM821J
	R507−510	CARBON FILM RESISTOR	RD1/4PM222J
	R511, 512	CARBON FILM RESISTOR	RD1/4PM104J
	R513, 514	CARBON FILM RESISTOR	RD1/4PMFL101J
	R515	CARBON FILM RESISTOR	RD1/4PM102J
	R516	CARBON FILM RESISTOR	RD1/4PM222J
	R517	CARBON FILM RESISTOR	RD1/4PMFL222J
	R518	CARBON FILM RESISTOR	RD1/4PMFL471J
	R519, 520	CARBON FILM RESISTOR	RD1/4PM100J
	R521, 522	FUSLIBLE RESISTOR	RFA1/4PL100J
	R615, 616	METAL OXIDE RESISTOR	RS2LMFR22J
	R701, 704	METAL OXIDE RESISTOR	RS2LMF181J
	R706	CARBON FILM RESISTOR	RD1/4PM392J
	R710, 711	METAL OXIDE RESISTOR	RS2LMF221J
	R712	METAL OXIDE RESISTOR	RS2LMF222J
	R713	METAL OXIDE RESISTOR	RS2LMF272J
		Other resistors	RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN3	30P SOCKET	AKP1094
	CN5	CONNECTOR (9P)	KPE9
	CN7	SOCKET (17P)	AKP1101
		PIN JACK 2P (PHONO)	AKB1100
		SPEAKER TERMINAL 4−P	AKE1012

● TRANS ASSEMBLY (AWZ3930)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC705	IC PROTECTOR	ICP−N75
	IC706, 707	IC PROTECTOR	ICP−N38
	IC708	IC PROTECTOR	ICP−N75

● FRONT ASSEMBLY (AWZ3935)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC2001, 2002	OP−AMP IC	RC4558DXP
	IC3001	CONTROL MCU	PDG078A

Mark	No.	Description	Parts No.
	Q2001, 2002	TRANSISTOR	2SC2878
	Q2003, 3001	TRANSISTOR	XDA143ES
	Q3002	TRANSISTOR	2SC2458
	D3001–3003	DIODE	1SS252
	D3005	ZENER DIODE	RD6.2ESB
	D3009–3017	DIODE	1SS252
	D318	ZENER DIODE	RD5.6ESB

SWITCHES

Mark	No.	Description	Parts No.
	S3001–3018	SWITCH (POWER, TIMER SET, WAKE UP, FM MONO, TUNER –, SFC BGM, SMART MEMORY, SFC CLEAR, S.STEREO WIDE, TREBLE EQ, DISPLAY, REC TIMER, FREQ/ST, TUNER +, SFC DISCO, SMART START/SET, FUNCTION CD, FUNCTION TUNER)	ASG1034
	S3020–3025	SWITCH (CLOCK ADJUST, MEMORY, BAND, SFC HALL, FUNCTION PHONO, FUNCTION TAPE	ASG1034

COIL

Mark	No.	Description	Parts No.
	L3001	AXIAL INDUCTOR	LAU220K

CAPACITORS

Mark	No.	Description	Parts No.
	C2001, 2002	CERAMIC CAPACITOR	CKSQYB153K50
	C2003, 2004	CERAMIC CAPACITOR	CKDYX823M16
	C2009, 2010	ELECTR. CAPACITOR	CEJA2R2M50
	C3001	CERAMIC CAPACITOR	CKSQYF473Z50
	C3002	ELECTR. CAPACITOR	CEJA010M50
	C3003	ELECTR. CAPACITOR	CEJA470M10
	C3004	CHIP CAPACITOR	CEAS010M50
	C3006, 3007	CERAMIC CAPACITOR	CKSQYF473Z50
	C3008	CHIP CAPACITOR	CKSQYB102K50
	C3009	ELECTR. CAPACITOR	CEAS471M10
	C3010–3012	CERAMIC CAPACITOR	CKSQYF473Z50
	C3100	CAPACITOR (0.047/5.5)	ACH1135

RESISTORS

Mark	No.	Description	Parts No.
	VR2001	VARIABLE (100K– ×2)	ACS1107
	R3020–3025	CARBONFILM RESISTOR	RD1/8PM563J
	R3028	CARBONFILM RESISTOR	RD1/8PM103J
	R3029	CARBONFILM RESISTOR	RD1/8PM101J
	R3032–3034	CARBONFILM RESISTOR	RD1/8PM223J
	R3035	CARBONFILM RESISTOR	RD1/8PM103J
	R3036–3041	CARBONFILM RESISTOR	RD1/8PM222J
		Other resistors	RS1/10S□□□J

OTHERS

Mark	No.	Description	Parts No.
	V3001	FL TUBE	AAV1142
		FL SPACFR	AEB1196
		REMOTE RECEIVER UNIT	AXX1010
	CN3	30P SOCKET	AKP1095
	X3002	CRYSTAL RESONATOR (8.00MHz)	ASS1015

◉ TUNER ASSEMBLY (AWZ3938)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC901	PLL IC	LM7001
	IC902	AM/FM IC	LA1265S
	IC903	MPX IC	AN7470P
	Q901	N–FET	2SK246
	Q902	TRANSISTOR	2SC1740SLN
	Q903, 904	TRANSISTOR	RN1203
	Q905–907	TRANSISTOR	RN2201
	Q909	TRANSISTOR	2SC2668
	Q910, 911	TRANSISTOR	2SC2458
	Q915, 916	TRANSISTOR	RN1203
	Q917	N–FET	2SK246
	D906, 907	DIODE	HSS104–02
	D909–911	DIODE	HSS104–02

COILS

Mark	No.	Description	Parts No.
	F903	CERAMIC FILTER	ATF–119
	F904	CERAMIC FILTER	ATF1042
	F905	CERAMIC FILTER	ATF–107
	F906	FILTER	ATF1088
	L903	AXIAL INDUCTOR	LAU2R2M
	L904	AXIAL INDUCTOR	LAU010M
	L905	AXIAL INDUCTOR	LAU2R2M
	L907	COIL	ATE–079
	L908	AXIAL INDUCTOR	LAU2R2M

CAPACITORS

Mark	No.	Description	Parts No.
	C901	ELECTR. CAPACITOR	CEAS330M16
	C903, 904	CERAMIC CAPACITOR	CKDYX473M25
	C905	AUDIO FILM CAPACITOR	CFTXA103J50
	C906	AUDIO FILM CAPACITOR	CFTXA224J50
	C907	CERAMIC CAPACITOR	CKDYX473M25
	C909	CERAMIC CAPACITOR	CKDYF103Z50
	C912–914	CERAMIC CAPACITOR	CCDCH150J50
	C915	CERAMIC CAPACITOR	CKDYF223Z50
	C916	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C919, 921	AXIAL CERAMIC CAPACITOR	CKPUYF473Z16
	C922	CERAMIC CAPACITOR	CKDYF223Z50
	C923	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C924	ELECTR. CAPACITOR	CEAS470M10
	C925	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C926	ELECTR. CAPACITOR	CEAS101M16
	C927	CERAMIC CAPACITOR	CCDSL470J50
	C928	ELECTR. CAPACITOR	CEAS470M10
	C929	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C930	ELECTR. CAPACITOR	CEAS101M16
	C931	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C932–935	CERAMIC CAPACITOR	CKDYF223Z50
	C936	ELECTR. CAPACITOR	CEAS4R7M50
	C937	CERAMIC CAPACITOR	CKDYF223Z50
	C938	ELECTR. CAPACITOR	CEAS010M50
	C939	CERAMIC CAPACITOR	CCDSL271J50
	C940	CERAMIC CAPACITOR	CKDYB222K50
	C941	CERAMIC CAPACITOR	CKDYF473Z50
	C942	ELECTR. CAPACITOR	CEAS2R2M50
	C943	ELECTR. CAPACITOR	CEAS470M10
	C944	ELECTR. CAPACITOR	CEAS0R1M50
	C945	ELECTR. CAPACITOR	CEANP2R2M50
	C946	ELECTR. CAPACITOR	CEAS470M16
	C947	CERAMIC CAPACITOR	CKDYF473Z50
	C948	CAPACITOR (470p)	ACE1039
	C949	ELECTROLYTIC CAPACIT	CEAS1R5M50
	C950	ELECTR. CAPACITOR	CEAS3R3M50
	C951	ELECTR. CAPACITOR	CEAS470M10
	C952, 953	CERAMIC CAPACITOR	CKDYB122K50
	C955	ELECTR. CAPACITOR	CEASR22M50
	C956	CERAMIC CAPACITOR	CKDYB122K50
	C957, 958	ELECTR. CAPACITOR	CEAS2R2M50
	C959	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C960	ELECTR. CAPACITOR	CEAS0R1M50
	C961, 962	CERAMIC CAPACITOR	CKDYB272K50
	C963	ELECTR. CAPACITOR	CEAS2R2M50
	C964	CERAMIC CAPACITOR	CKPUYB101K50
	C965	CERAMIC CAPACITOR	CKPUYB102K50
	C967	ELECTR. CAPACITOR	CEAS101M16

RESISTORS

Mark	No.	Description	Parts No.
	VR901 (10k)	VR	ACP–105
	VR902 (20k)	VR	ACP1004
	VR903 (5.0k)	VR	ACP1015
		Other resistors	RD1/8PM□□□J

OTHERS

Mark	No.	Description	Parts No.
	X901	CRYSTAL RESONATOR (7.200MHz)	ASS1042
	X902	CERAMIC RESONATOR	ATF1027
	CN10	CONNECTOR (10P)	KPE10
		ANTENNA TERMINAL 4–P	AKA1010
		AM RF TUNING BLOCK	AXX1026
		2 SERIAL F.E.MODULE ASSEMBLY	AXQ1002

◉ VOLUME ASSEMBLY (AWZ3941)

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC5001	MECHANISM DRIVER IC	TA7291S
	IC5002	OP–AMP IC	RC4558DXP

CAPACITORS

Mark	No.	Description	Parts No.
	C5001, 5002	ELECTR. CAPACITOR	CEAS2R2M50
	C5003, 5004	ELECTR. CAPACITOR	CEAS4R7M50
	C5005–5008	CHIP CAPACITOR	CKSQYB393K50
	C5009, 5010	ELECTR. CAPACITOR	CEAS100M25
	C5012	CERAMIC CAPACITOR	CKCYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	VR5001	VARIABLE RESISTOR (with motor)	ACX1068
		Other resistors	RS1/10S□□□J

◉ HEADPHONE ASSEMBLY (AWZ3942)

CAPACITOR

Mark	No.	Description	Parts No.
	C599	CERAMIC CAPACITOR	CKCYX473M25

RESISTORS

Mark	No.	Description	Parts No.
	R523, 524	METAL OXIDE RESISTOR	RS1LMF331J
	R599	CARBONFILM RESISTOR	RD1/8PM100J

OTHERS

Mark	No.	Description	Parts No.
	CN	JACK (HEADPHONE)	AKN1028

5. ADJUSTMENTS

- As to connections and points to be adjusted, refer to Fig. 5−1.
- Where and asterisk (*) is given for "level dBμV", set to the level (dBμV) at which the voltage is roughly half the voltage between TP904 and GND at 60dB.

5.1 FM TUNER ADJUSTMENT

- Set the BAND selector to "FM".
- Perform VCO adjustment two minutes or more after turning the power ON.

Note :
Stereo modulation : Main 1kHz L+R ±68.25kHz dev.
Pilot 19kHz ±6.75kHz dev.

Step No.	Adjustment title	FM SG (1kHz±75kHz dev.)		Reception frequency display	Adjustment location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Detector coil T-meter adjustment	98.0	80	98.0MHz	L907	Adjust so that the DC voltage between the TP901 and TP902 is 0±50mV.
2	VCO adjustment	98.0 Non modulation	80	98.0MHz	VR903	Adjust so that the frequency between TP905 and GND is 76±0.5kHz.
3	TUNED indicator sensitivity adjustment	98.0 (Stereo modulation)	18 (±3dB)	98.0MHz	VR902	Adjust so that the indicator lights up.

5.2 AM TUNER ADJUSTMENT

- Set the BAND selector "AM".

Note : Adjustment marked with "※"is only for HEWZI.

Step No.	Adjustment title	AM SG (400Hz 30% Mod.)		Reception frequency display	Adjustment location	Specifications
		Frequency (kHz)	Level (dBμV)			
1	Tracking adjustment ※	603	*	603kHz	MW block ANT coil	Adjust so that the DC voltage between TP904 and GND is maximum.
2		1395		1395kHz	TC901	
3		Repeat 1 and 2 above				
4	IFT adjustment※	603	*	603kHz	F904	
5	TUNED indicator sensitivity adjustment	999	55±5	999kHz	VR901	Adjust so that the indicator lights up.

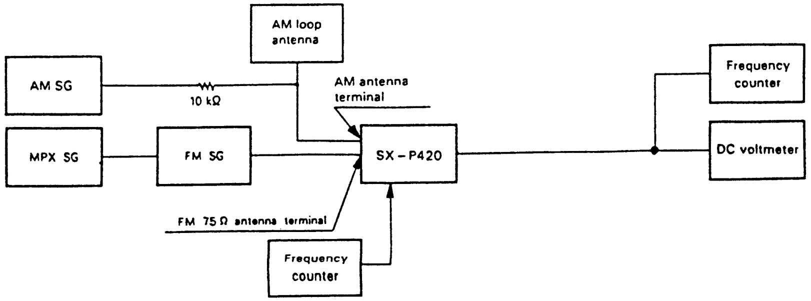


Fig. 5−1 FM and AM adjustment wiring diagram

5. REGLAGE

- Les raccordements et les points de réglages sont représentés à la Fig. 5−1.
- Lorsqu'un astèrisque accompagne un "niveau dBμV", régler à un niveau (dBμV) tel que la tension soit à peu près la moitié de celle qui est présente entre TP904 et GND pour 60dB.

5.1 REGLAGE DU SYNTONISEUR FM

- Placer le sélecteur BAND sur la position "FM".
- Régler le VCO après deux minutes (ou plus) de mise sous tension.

Note :
Modulation stéréo : Principal 1kHz L+R ±68,25kHz dev.
Pilote 19kHz ±6,75kHz dev.

Etape No.	Items de réglage	FM SG (1kHz±75kHz dév.)		Affichage de fréquence de réception	Liea de réglage	Caractéristiques
		Fréquence (MHz)	Niveau (dBμV)			
1	Réglage de la bobine de détection	98,0	80	98,0MHz	L907	Régler de manière que la tension continue entre TP901 et TP902 soit égale à 0±50mV.
2	Réglage du VCO	98,0 Sans modulation	80	98,0MHz	VR903	Régler de manière que la fréquence entre TP905 et GND soit égale à 76±0,5kHz.
3	Indicateurs de TUNED Niveau d'éclairement	98,0 (Stéréo modulation)	18 (±3dB)	98,0MHz	VR902	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

5.2 REGLAGE DU SYNTONISEUR AM

- Placer le sélecteur BAND sur la position "AM".

Note : Le réglage indiqué par ※ n'est que pour HEWZI.

Etape No.	Items de réglage	AM SG (400Hz 30% Mod.)		Affichage de fréquence de réception	Liea de réglage	Caractéristiques
		Fréquence (kHz)	Niveau (dBμV)			
1	Reglage de l'alignement ※	603	*	603kHz	Bobine-antenne bloc PO	Régler de manière que la tension continue entre TP904 et GND soit maximale.
2		1395		1395kHz	TC901	
3		Répète 1 et 2 ci-dessus.				
4	Réglage IFT※	603	*	603kHz	F904	
5	Indicateurs de TUNED Niveau d'éclairement	999	55±5	999kHz	VR901	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

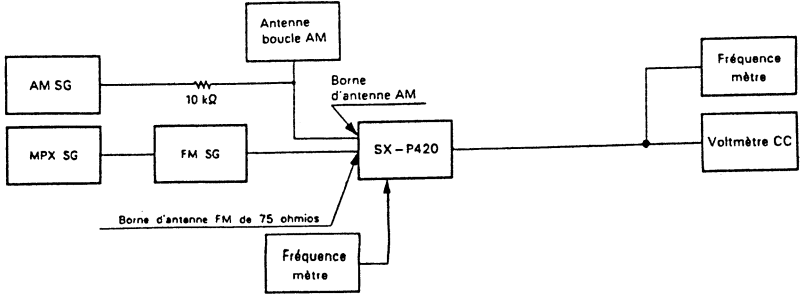


Fig. 5−1 Diagramme de câblage de réglage FM et AM

5. AJUSTE

- Para las conexiones y puntos de ajuste, refiérase a la Fig. 5−1.
- Donde un asterisco (*) represente el "nivel dBμV", ajuste al nivel (dBμV) en el que la tensión sea aproximadamente la mitad de la tensión entre TP904 y GND a 60dB.

5.1 AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE FM

- Ajuste el selector BAND a la posición "FM".
- Realice el ajuste VCO dos minutos o más después de conectar la alimentación.

Nota :
Modulación estéreo : Principal 1kHz L+R ±68,25kHz dev.
Pilot 19kHz ±6,75kHz dev.

N° de paso	Items de ajuste	FM SG (1kHz±75kHz dev.)		Fresuenci metro de recepción	Lugar de Ajuste	Especificaciones
		Frecuencia (MHz)	Nivel (dBμV)			
1	Ajuste del medidor T de la bobina detectora	98,0	80	98,0MHz	L907	Ajuste de manera que la tensión de CC entre TP901 y TP 902 sea de 0±50mV.
2	Aduste VCO	98,0 Sin moduiación	80	98,0MHz	VR903	Ajuste de manera que la frequencia entre TP905 y GND sea de 76±0,5kHz.
3	Nivel de iluminación de TUNED.	98.0 (Modulation estéreo)	18 (±3dB)	98,0MHz	VR902	Ajústelo de forma que los indicadores de TUNED comiencen a encenderase.

5.2 AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE AM

- Ajuste el selector BAND a la posición "AM".

Nota : El ajuste marcado con ※ es sólo para HEWZI.

N° de paso	Items de ajuste	AM SG (400Hz 30% Mod.)		Fresuenci metro de recepción	Lugar de Ajuste	Especificaciones
		Frecuencia (kHz)	Nivel (dBμV/m)			
1	Ajuste de alineación ※	603	*	603kHz	Bobina de antena colectiva de MW	Ajuste de manera que la tensión de CC entre TP904 y GND sea la máxima.
2		1395		1395kHz	TC901	
3		Repita los pasos 1 y 2 arriba descritos				
4	Ajuste de IFT※	603	*	603kHz	F904	
5	Nivel de iluminación de TUNED.	999	55±5	999kHz	VR901	Ajústelo de forma que los indicadores de TUNED comiencen a encenderase.

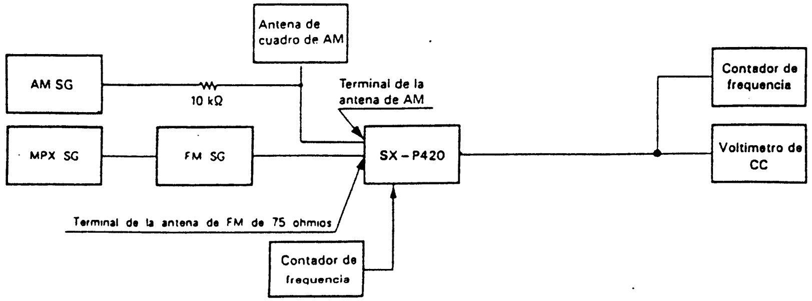


Fig. 5−1 Diagramma de conexión de ajuste de FM y AM

6. IC INFORMATION

■ PDG078A (IC3001) : TUNER CONTROL MICRO-COMPUTER

● Pin Function

No.	Pin Name	I/O	Description	ACT
1	STEREO	I	STEREO Signal	L
2	REMOCON	I	REMOCON Signal	
3	TUNE	I	TUNE Signal	L
4	MONO	O	FM MONO Output	H
5	LOCAL	O	FM LOCAL Output	H
6	9k/10k	I	Switchig Channel Step Frequency	H : 9k
7	POWER	O	POWER ON/OFF Switching	L
8	DISP CLK	I	CLOCK Input for CD display data communication.	
9	DISP DATA	I	DATA Input for CD display data communication.	
10	SP RELAY	O	Relay control for speaker.	L
11	VOL UP	O	Output for motor VR control IC (TA7291S).	H
12	VOL DOWN	O	Output for motor VR control IC (TA7291S).	H
13	NC	O	NC	
14	KEY IN1	I	Key Scan Input 1	H
15	KEY IN2	I	Key Scan Input 2	H
16	KEY IN3	I	Key Scan Input 3	H
17	S. CLK	O	CLOCK Output for system bus communication.	
18	S. DATA	I/O	DATA Input/Output for for system bus communication.	
19	REQ/EN CD	I/O	CD Communication Request/Enable for system bus communication.	
20	REQ/EN DECK	I/O	DECK Communication Request/Enable for system bus communication.	
21	MUTE	O	LINE MUTE Control	H
22	VOL POSITION	I	NC	
23	BPF IN 1	I	NC	
24	BPF IN 2	I	NC	
25	BPF IN 3	I	NC	
26	BPF IN 4	I	NC	
27	BPF IN 5	I	NC	
28	MODEL A	I	Port A for switching destination L : HE, HB types H : HEWZI type	
29	MODEL B	I	Port B for switching destination H : HE, HB types L : HEWZI type	
30	RET		MICRO-COMPUTER RESET Input	L
31	EXTAL		Connected to ceramic oscillator (ASS1015) (8MHz).	
32	XTAL			
33	Vss	GND	Reference Voltage (GND)	
34	TREBLE 1	O	Control Output forSFC IC (PA0049)	
35	TREBLE 2	O		
36	BASS 1	O		
37	BASS 2	O		
38	WIDE 1	O		
39	WIDE 2	O		
40	AUDITION	O	AUDITION ON/OFF	H
41	MIC MUTE	O	Mic Mixing cancel (Playing ASES)	H
42	4052 INH	O	FUNCTION switching IC Control Output	
43	4052 B	O	FUNCTION switching IC Control Output	
44	4052 A	O	FUNCTION switching IC Control Output	
45	FL S1	O	FL Cotrol Segment Output	
46	FL S2/KO9	O	FL Cotrol Segment Output/ Key Scan Strobe Output	
47	FL S3/KO8	O		
48	FL S4/KO7	O		

No.	Pin Name	I/O	Description	ACT
49	FL S5/KO6	O	FL Cotrol Segment Output/ Key Scan Strobe Output	
50	FL S6/KO5	O		
51	FL S7/KO4	O		
52	FL S8/KO3	O		
53	FL S9/KO2	O		
54	FL S10/KO1	O		
55	FL S11	O	FL Control Segment Output	
56	FL S12	O		
57	FL S13	O		
58	FL S14	O		
59	FL S15	O		
60	FL 11G	O	FL Control Timing Output	
61	FL 10G	O		
62	FL 9G	O		
63	FL 8G	O		
64	FL 7G	O		
65	FL 6G	O		
66	FL 5G	O		
67	FL 4G	O		
68	FL 3G	O		
69	FL 2G	O		
70	FL 1G	O		
71	Vfdp	I	−30V FDP load power Input	
72	Vdd	I	+5V Power Supply Input	
73	NC	O	NC	
74	1067 STB	O	Chip enable for Port expander IC	H
75	PLL EC	O	Chip enable for Tuner PLL IC	H

No.	Pin Name	I/O	Description	ACT
76	PLL/1067 DATA	O	DATA for Tuner PLL IC and Port expander IC	
77	PLL/1067 CLK	O	CLOCK for Tuner PLL IC and Port expander IC	
78	50/60Hz IN	I	AC pulse Input	
79	MODEL C	I	Port C for switching destination L : SINGLE CD H : TWIN/MULTI CD	
80	DISP CLK	I	CLOCK Input for CD display data communication	

7. FOR HB AND HEWZI TYPES

NOTES:

- *Part without part number cannot be supplied.*
- *The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

7.1 CONTRAST OF MISCELLANEOUS PARTS

SX – P420/HB, HEWZI and SX – P420/HE have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		SX – P420/ HE type	SX – P420/ HB type	SX – P420/ HEWZI type	
◉	POWER assembly	AWZ3928	AWZ3928	AWZ3929	
◉	TRANS assembly	AWZ3930	AWZ3930	AWZ4239	
◉	FRONT assembly	AWZ3935	AWZ3935	AWZ3936	
◉	TUNER assembly	AWZ3938	AWZ3938	AWZ3939	
◉	VOLUME assembly	AWZ3941	AWZ3941	AWZ3963	
◉	HEADPHONE assembly	AWZ3942	AWZ3942	AWZ3943	
△	C1 Capacitor (0.01/AC400V)	....	....	ACG1003	
△	AC Power cord	ADG1049	ADG1087	ADG1012	
	Screw	....	....	ABA – 115	(For GND)
	FM antenna	ADH1005	ADH1005	....	
	FM antenna assembly	....	....	ADH1002	
	Operating instructions (Dutch/Swedish/Spanish/Portuguese)	ARC1324	....	....	(Stereo receiver/ Speaker system)
	Operating instructions (Dutch/Swedish/Spanish/Portuguese)	ARC1325	....	....	(Cassette deck CD)
	Operating instructions (English/French/German/Italian)	ARE1223	....	....	(Stereo receiver/ Speaker system)
	Operating instructions (English/French/German/Italian)	ARE1231	....	....	(Cassette deck CD)
	Operating instructions (English)	....	ARB1362	....	(Stereo receiver/ Speaker system)
	Operating instructions (English)	....	ARB1363	....	(Cassette deck CD)
	Operating instructions (German, Italian)	....	....	ARC1336	(Stereo receiver/ Speaker system)
	Operating instructions (German, Italian)	....	....	ARC1339	(Cassette deck CD)

◉ POWER ASSEMBLY (AWZ3929)

POWER assembly (AWZ3929) and POWER assembly (AWZ3928) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3928	AWZ3929	
	D601–D605	1SS252	HSS104–02	
	D712–D714, D716, D717	1SS252	HSS104–02	
	L501, L502	ATH–133	ATH–059	
	L503, L504	....	ATH–059	
	C103, C104, C108	CCCSL101J50	CKCYB391K50	
	C107	CCDSL101J50	CKCYB391K50	
	C151, C152, C155–C157, C160, C171, C172	....	CKCYB471K50	
	C153	....	CCCSL470J50	
	C154	....	CCDSL470J50	
	C158, C159, C161, C162	....	CKDYB471K50	
	C163, C164	....	CCCSL101J50	
	C165	....	CKCYB391K50	
	C166	....	CKDYB391K50	
	C503, C504	CKCYB331K50	....	
	C518, C519	....	CKCYF103Z50	
	C521, C522, C526	....	CCDSL101J50	
	C523, C524	....	CKDYB102K50	
	C703 (0.01μF/AC250V)	ACG1005	....	
	C703	....	CQMA473K250	
	C713	CEAS470M63	CEAS470M100	
	R121, R122, R501, R502	RD1/8PM102J	RD1/8PM222J	
	R151, R152	....	RD1/8PM221J	
	R153, R154	....	RD1/8PM471J	
	R155–R158	....	RD1/8PM101J	

◉ TRANS ASSEMBLY (AWZ4239)

TRANS assembly (AWZ4239) and TRANS assembly (AWZ3930) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3930	AWZ4239	
	C11, C12	....	CQMXA473J100	

◉ FRONT ASSEMBLY (AWZ3936)

FRONT assembly (AWZ3936) and FRONT assembly (AWZ3935) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3935	AWZ3936	
	D3001–D3003	1SS252	HSS104–02	
	D3009–D3017	1SS252	HSS104–02	

◉ VOLUME ASSEMBLY (AWZ3963)

VOLUME assembly (AWZ3963) and VOLUME assembly (AWZ3941) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3941	AWZ3963	
	C5013, C5014	....	CCSQSL101J50	

◉ HEADPHONE ASSEMBLY (AWZ3943)

HEADPHONE assembly (AWZ3943) and HEADPHONE assembly (AWZ3942) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3942	AWZ3943	
	C551, C552	....	CCCSL101J50	

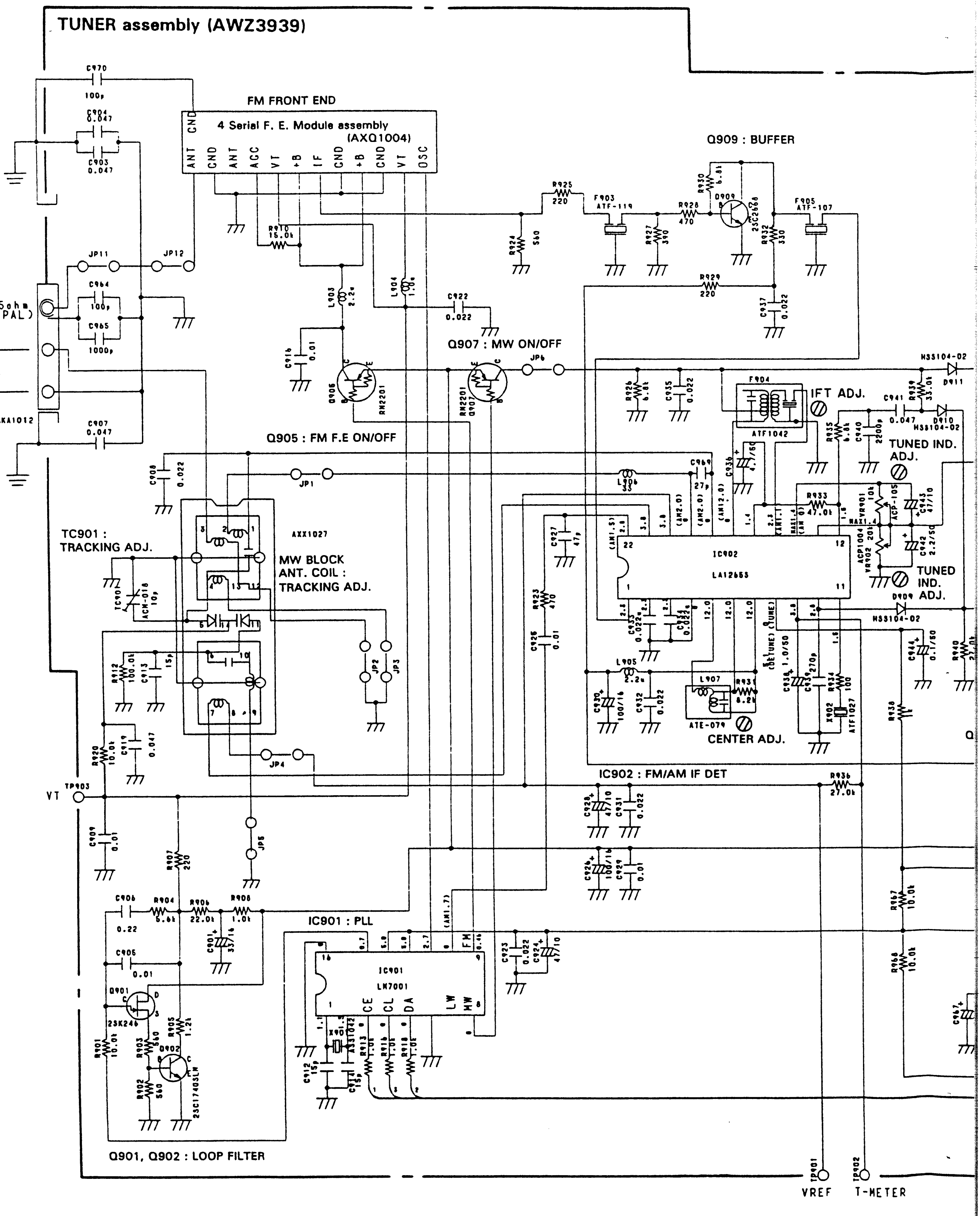
◉ TUNER ASSEMBLY (AWZ3939)

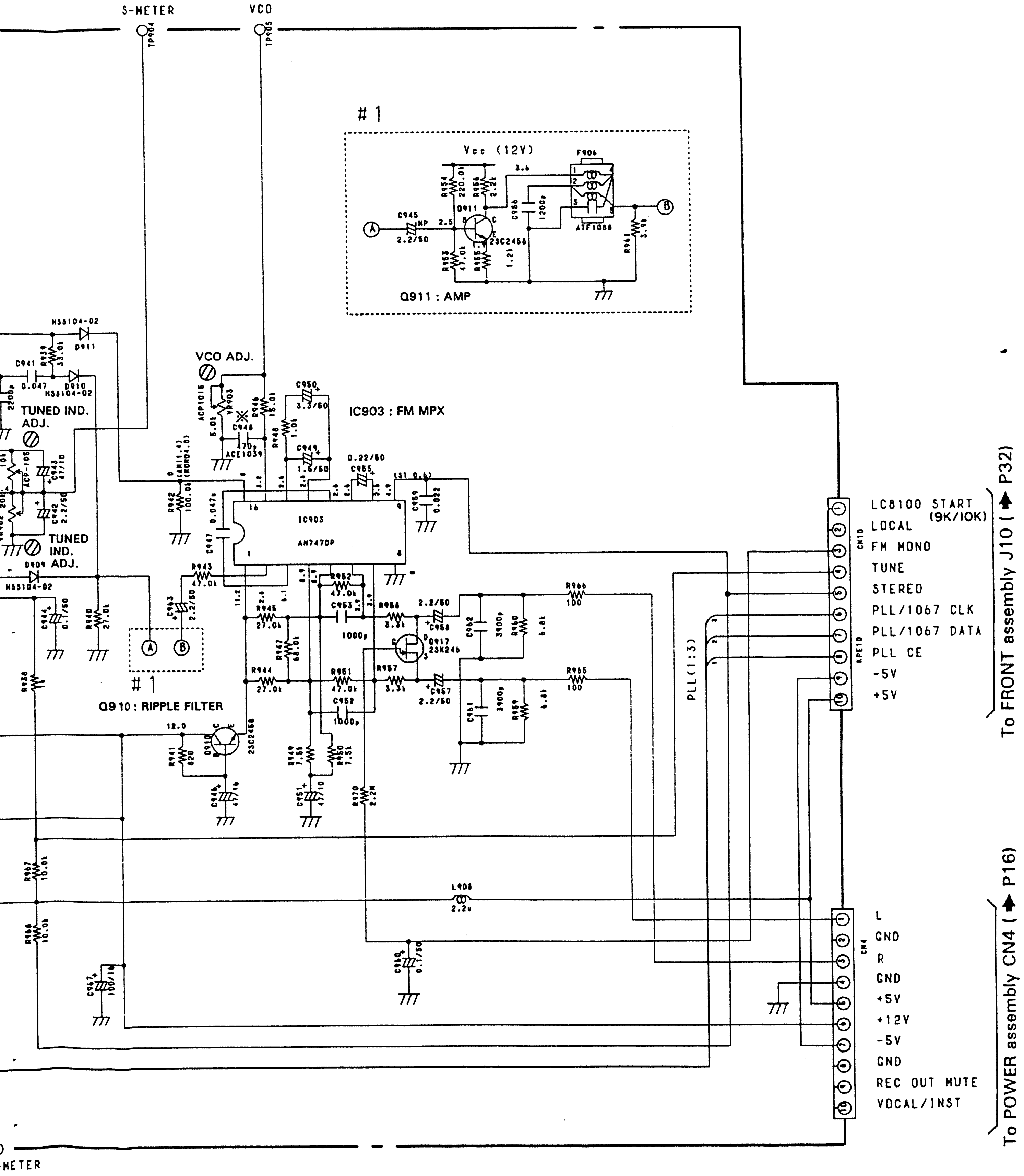
TUNER assembly (AWZ3939) and TUNER assembly (AWZ3938) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3938	AWZ3939	
	Q903, Q904, Q915, Q916	RN1203	....	
	Q906	RN2201	....	
	D906, D907	HSS104-02	....	
	L906	....	LAU330K	
	TC901	....	ACM-018	
	C908	....	CKPUYF223Z25	
	C915	CKDYF223Z50	....	
	C921	CKPUYF473Z16	....	
	C952, C953	CKDYB122K50	CKDYB102K50	
	C961, C962	CKDYB272K50	CKDYB392K50	
	C969	....	CCDCH270J50	
	C970	....	CCDCH101J50	
	R911, R914, R919	RD1/8PM103J	....	
	R915, R917	RD1/8PM102J	....	
	R924	RD1/8PM331J	RD1/8PM561J	
	R925	....	RD1/8PM221J	
	R955	RD1/8PM152J	RD1/8PM122J	
	R959, R960	RD1/8PM392J	RD1/8PM682J	
	2 Serial F.E. module assembly	AXQ1002	....	
	4 Serial F.E. module assembly	....	AXQ1004	
	4P antenna terminal with PAL	AKA1010	....	
	2P antenna terminal with PAL	....	AKA1012	
	AM RF Tuning block	AXX1026	AXX1027	

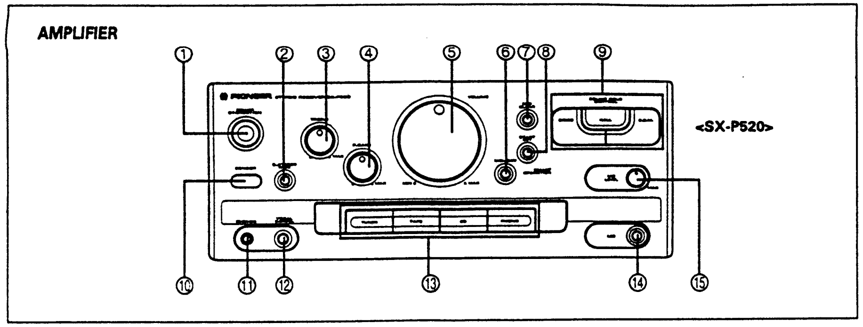
NOTE :
PCB connection diagram for HEWZI type, refer to page 9.

7.2 SCHEMATIC DIAGRAM
(TUNER assembly : For HEWZI type)


TUNER assembly (AWZ3939)
FM FRONT END
4 Serial F. E. Module assembly
(AXQ1004)
ANT GND GND ANT AGC VT +B IF GND +B GND VT OSC
Q909 : BUFFER
2SC2668
F903 ATF-119
F905 ATF-107
FM 75ohm (PAL)
AM
AKA1012
JP11
JP12
Q906 RN2201
Q907 : MW ON/OFF
Q907 RN2201
JP6
Q905 : FM F.E ON/OFF
JP1
L906
TC901 :
TRACKING ADJ.
ACM-018
AXX1027
MW BLOCK
ANT. COIL :
TRACKING ADJ.
JP2
JP3
JP4
JP5
VT
TP903
F904
ATF1042
IFT ADJ.
H3S104-02
D911
D910
TUNED IND.
ADJ.
ACP-105
ACP1004
VR901
VR902
TUNED
IND.
ADJ.
D909
IC902
LA1265S
L905
L907
ATE-079
CENTER ADJ.
X902
ATF1027
IC902 : FM/AM IF DET
IC901 : PLL
IC901
LM7001
CE CL DA LW MW FM
Q901
2SK246
Q902
2SC1740SLN
Q901, Q902 : LOOP FILTER
TP901
VREF
TP902
T-METER
1 2 3
A B C D


S-METER
TP904
VCO
TP905
# 1
Vcc (12V)
F906
R954 220.0k
R956 2.2k
3.6
D911
C945 NP 2.2/50
2.5
C956 1200p
2SC2458
ATF1088
R963 47.0k
R955
1.21
R961 3.9k
Q911 : AMP
HSS104-02
D911
C941 0.047
R939 33.0k
D910 HSS104-02
TUNED IND. ADJ.
ACP-105
C943 47/10
C942 2.2/50
TUNED IND. ADJ.
D909
HSS104-02
VCO ADJ.
ACP1015
VR903 5.0k
C948 470p
ACE1039
R946 15.0k
R948 1.0k
C950 3.3/50
C949 1.0/50
IC903 : FM MPX
0.22/50
C955
(ST 0.6)
C959 0.022
R942 100.0k
C947 0.047u
IC903
AN7470P
R943 47.0k
C963 2.2/50
C944 0.1/50
R940 27.0k
# 1
Q910 : RIPPLE FILTER
R945 27.0k
R952 47.0k
C953
R958 3.3k
2.2/50
C958
1000p
R947 68.0k
Q917 2SK246
R944 27.0k
R951 47.0k
C952 1000p
R957 3.3k
C957 2.2/50
C962 3900p
R960 6.8k
R966 100
C961 3900p
R959 6.8k
R965 100
12.0
R941 820
Q910
2SC2458
C946 47/16
R949 7.5k
R950 7.5k
C951 47/10
R970 2.2M
R938
R967 10.0k
R968 10.0k
L908 2.2u
C960 0.1/50
C967 100/16
PLL(1:3)
CN10
KPE10
LC8100 START (9K/10K)
LOCAL
FM MONO
TUNE
STEREO
PLL/1067 CLK
PLL/1067 DATA
PLL CE
-5V
+5V
To FRONT assembly J10 (P32)
CN4
L
GND
R
GND
+5V
+12V
-5V
GND
REC OUT MUTE
VOCAL/INST
To POWER assembly CN4 (P16)
-METER

8. PANEL FACILITIES



AMPLIFIER

① POWER STANDBY/ON switch
This is the switch for electric power.

ON:	When set to the ON position, power is supplied and the unit becomes operational.
STANDBY:	When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The display shows only the time.)

② S.STEREO WIDE button

③ TREBLE button (SX-P420)
TREBLE control (SX-P520)

④ P.BASS control

⑤ VOLUME control

⑥ SMART OPERATION MEMORY button

⑦ SFC CLEAR button

⑧ SMART OPERATION START/SET button

⑨ SOUND FIELD CONTROL buttons (DISCO, HALL, B.G.M.)

⑩ Remote sensor window (SENSOR)

⑪ Headphones jack (PHONES)

⑫ VOCAL CANCEL button (multi-voltage and Australian models only)

⑬ Input selector buttons (TUNER/TAPE/CD/PHONO)
Except for U.K. model: (TUNER/TAPE/CD/VIDEO)

⑭ Microphone jack (MIC) (multi-voltage and Australian models only)

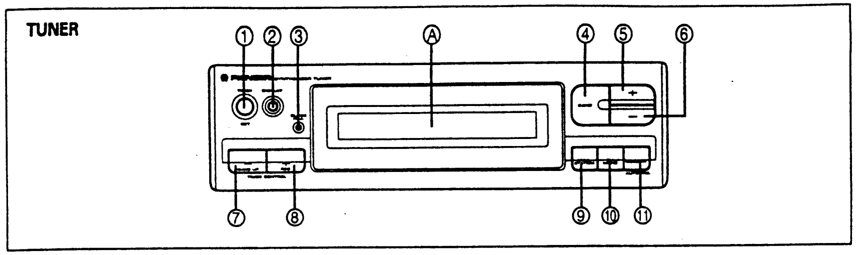
⑮ MIC LEVEL control (multi-voltage and Australian models only)

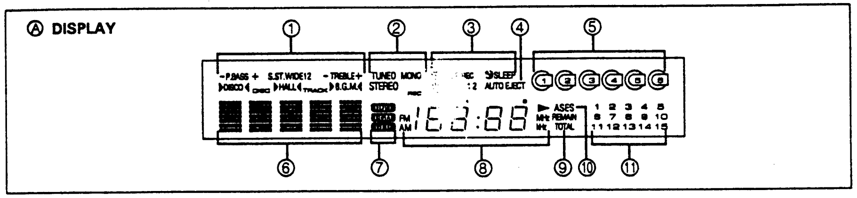
Auto Function
This model is equipped with "Auto Function" operation, so when the switch for CD PLAY, RANDOM, PLAY (tape), +/– (tuner up/down) or BAND is pressed, the function switches automatically. Use the PHONO (VIDEO) function button to select the component connected to the PHONO (VIDEO) jacks, since Auto Function is not effective for this.

NOTE:
The function cannot be switched during recording except for tape copying. (Auto Function does not operate either.)

Demo Function
To enter the demo mode, press SFC CLEAR when power is off. The power is automatically turned on. In the demo mode, various functions of this system appear on the display. When a program source is selected, you can enjoy listening to the selected source simultaneously.

To cancel demo mode:
Press any button of the amplifier or remote control unit.





TUNER

① TIMER SET button

② DISPLAY button

③ CLOCK ADJ. button

Ⓐ Display

④ BAND button

⑤ + (tuner up) button

⑥ – (tuner down) button

⑦ TIMER CONTROL WAKE UP/– button

⑧ TIMER CONTROL REC/+ button

⑨ FREQ./STATION button

⑩ FM MONO button

⑪ AUTO PRE. MEMORY button

Ⓐ DISPLAY

① Sound field control indicators
Display the SOUND FIELD CONTROL settings.

② Tuner indicators
Indicate the tuning mode.

③ Timer indicators
Display timer settings.

④ AUTO EJECT indicator (For PDC-P520T)
Lights when AUTO EJECT function is ON.

⑤ Disc number indicators (For PDC-P520M and PDC-P520T (No.1 and No. 2 only))

⑥ Function display
Normally functions as a spectrum analyzer.
Also, this displays the selected function. In the TUNER mode, this displays the station No., and when playing a CD it displays the track No.

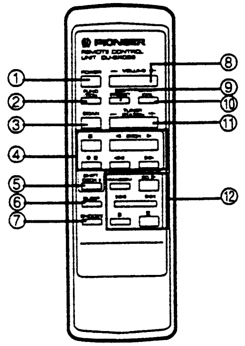
⑦ RND: Lights during random play for CD player.
PGM: Lights during program input and program play for CD player.
REP: Lights during repeat play for CD player.

⑧ Frequency/Time display
In TUNER mode, frequency is displayed. In any other mode it displays the time.

⑨ REMAIN/TOTAL indicator (For CD player)
In CD mode, "REMAIN" shows the remaining play time and "TOTAL" shows the total play time.

⑩ ASES (Auto Synchro Editing System) indicator
Lights when A.S.E.S. is performed.

⑪ Music calendar (For CD player)



- The illustration shows the remote control unit supplied with the SX-P420 model.

REMOTE CONTROL UNIT

① **POWER button**

② **FUNCTION button**

Each time this button is pressed, the function changes in the following sequence: TUNER → TAPE → CD
PHONO ←
(Except for U.K. model: VIDEO)

③ **SCAN button**

In TUNER mode: This button is used for scanning preset stations.
In CD mode: This button is used for Hi-Lite Scan.

④ **DECK I/II operation buttons**
(◄► Play, ■ Stop, ◄◄ ►► Fast,
● II Rec pause)

⑤ **SHIFT DECK II button**

To operate Deck II, press the desired deck operation button while pressing this button.

⑥ **SLEEP button**

⑦ **SNOOZE button**

⑧ **VOLUME –/+ button**

⑨ **SFC PRESET button**

Each time this button is pressed, the SOUND FIELD CONTROL setting changes in the following sequence: DISCO → HALL → BGM → SFC clear

⑩ **SMART OPE. button**

⑪ **TUNER STATION –/+ button**

⑫ **CD operation buttons**
(► Play, ■ Stop, II Pause, ◄◄ ►► Track search, RANDOM (For SX-P420/PDC-P420), **DISC** (For SX-P520/PDC-P520T and PDC-P520M)**)**

9. SPECIFICATIONS

STEREO RECEIVER: SX-P420

Amplifier Section

Continuous Power Output (DIN)	24 W + 24 W (1 kHz, T.H.D. 1%, 8 ohms)
Continuous Power Output (RMS)	30 W + 30 W (1 kHz, T.H.D. 5%, 8 ohms)
Music Power (DIN)	40 W + 40 W (1 kHz, T.H.D. 10%, 8 ohms)
Total Harmonic Distortion (1 kHz, 17.5 W, 8 ohms)	0.2%*

Miscellaneous

Power Requirements	220 - 230 V AC, 50/60 Hz
Power Consumption	155 W
Dimensions	260 (W) x 180 (H) x 301 (D) mm
Weight (without package)	4.6 kg

FM/AM Tuner Section

FM Tuner Section

Frequency Range	87.5 MHz to 108.0 MHz
Usable Sensitivity	Mono: 12.8 dBf, IHF (1.2 µV/75 ohms)
Sensitivity (DIN)	Mono S/N 26 dB: 1 µV/75 ohms Stereo S/N 46 dB: 50 µV/75 ohms
Signal-to-Noise Ratio (IHF, 85 dBf Input)	Mono: 77 dB Stereo: 73 dB
Signal-to-Noise Ratio (DIN)	Mono: 66 dB Stereo: 60 dB
Distortion	Stereo: 0.5 % (1kHz)
Antenna Input	75 ohms unbalanced

AM (MW) Tuner Section

Frequency Range	531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna)	350 µV/m
Antenna	Loop Antenna

LW Tuner Section (For LW equipped models only)

Frequency Range	153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna)	1500 µV/m
Antenna	Loop Antenna

Accessories

Remote Control Unit	1
Dry Cell Batteries (AAA/R03-UM4)	2
FM T-type Antenna	1
AM Loop Antenna	1
Operating Instructions	1

* Measured by audio spectrum analyzer.

NOTE:
Specifications and design subject to possible modification without notice due to improvements.